



Educ P 229.18



HARVARD
COLLEGE
LIBRARY

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. I.

WINDSOR, VT., MAY, 1847.

No. 1.

THE SCHOOL JOURNAL.

For Prospectus see last page.

Introductory.

This paper is devoted, it will be noticed, partly to EDUCATION (more particularly Common School Education) and partly to AGRICULTURE and DOMESTIC ECONOMY. By uniting these two great interests, or rather by presenting them together in what is among us their natural union, the paper commends itself to every citizen and to every fireside.

It appears from the First Report of the State Superintendent, that the number of school districts in Vermont is about 2,750; the number of children between the ages of four and eighteen, more than 100,000; and the annual expenditures for the support of schools, about \$200,000. In the success of these schools, in the proper instruction and training of these children, and in the expenditure of this large amount, every citizen has a personal interest. Most have children, or brothers, or sisters, in the schools; and all are concerned to see them answer their purpose as a means of securing the intelligence, good order and thrift, of the community.

The people of Massachusetts expend annually for educational purposes, more than a million of dollars. "Whether paid in the form of taxes," says Governor Briggs in his last Message, "or by voluntary contributions, nothing could furnish better evidence of a wise and prudent foresight, or of an enlightened philanthropy than the appropriation of such an amount of money for the purposes of education. No tax could be imposed, and in no manner could so much money be expended, in which every class of people would share so equally in its benefits. The poor receive the priceless treasure of instruction and knowledge which, in their misfortune, they have not the means of acquiring.

"The rich are amply repaid for all they expend in the protection which the education of the poor secures to them against the depredations of ignorance and of crime. It is the best insurance on property, at the lowest premium. It is the surest guarantee for the safety and morals of a community that can be effected. While it saves the expense of poor-houses, jails and penitentiaries, it does what is infinitely more important. It rescues those unfortunate beings who would otherwise have been the inmates of those wretched abodes of fallen and suffering humanity, and elevates them to the true condition of moral, intellectual and

immortal beings. That legislature, or that people, which shall do the most to advance this cause of civilization, patriotism and Christianity, may expect, what is far more desirable than the loudest and longest applause that ever burst from an excited multitude, the blessing of God and the blessing of the poor."

The Common School System is one of those features in the policy of our fathers, which are the glory of our inheritance from them, and through which the people of New England, as President EVERETT lately remarked, are distinguished by a higher degree of general intelligence, morality, and comfort, than any other like population on the face of the earth. Common Schools are an *essential* feature of that policy which has made these States what they are. It becomes us fully to recognize their importance, and turn an agency so precious to the best account.

The movements in the business world that have characterized our times—the steamboats, the railroads, the lightning telegraphs, and kindred means by which the business of the world is driven on and riches made to flow in upon us like a river—justly excite our admiration. But they are not alone. Intellectual and moral changes have been going on—mind is awakened, stimulated, instructed, by a thousand new agencies, and becomes every day better able to control and make subservient to its highest purposes, the material resources and energies that are so rapidly developed. It is natural that education should participate in this general movement. Accordingly there is not a State in New England, we believe not a State in the Union, and hardly a country in all Christendom, in which there has not been, within the last twenty-five years, some decided movement in regard to this essential interest. In New England the Common School Systems have been thoroughly reviewed, and able men have devoted themselves, with the earnestness of missionaries, to the improvement of the schools. School Journals have been published, lectures delivered, conventions held, teachers called together for purposes of consultation and mutual improvement, the state of the schools investigated, and the results laid fully before the people, showing what are the interests involved, what the defects and evils to be removed, and suggesting remedies. By means like these, the Common School System, taking our country as a whole, has been made to keep pace, in its advance, with the other movements of our time.

As a matter of course Vermont has participated, to some extent, in this general spirit. For years the attention of many among us has been earnestly devoted to this subject, and no small advances have been made.

The law under which our schools are now organized is an expression of the general desire for more united and active exertions in this cause. As a people we are convinced that our schools are not what they might be—that our money and the precious years of our children's lives, are not employed to the best advantage—that we might reap far richer fruits from our educational arrangements—and that in this department of human activity as much as in any other—nay, that in this department pre-eminently, above all other earthly interests—it is our duty as a people to prosper. It is seen more and more clearly that the education of youth, of all the youth, is both a primary interest and a primary duty of the State.

Again, we are an agricultural people—more exclusively so than the citizens of any other State. The number of persons employed and the capital invested in other departments of industry, bear but a very small proportion to the whole amount of our population. And as agriculture is of course improved with the increase of intelligence among those devoted to it, it follows that the better education of our children is the surest way to secure the permanent improvement of our farms and increase of our agricultural products and wealth.

In view of these considerations, the close relationship of the two departments of our paper is at once seen. It is evident, too, that even a slight general improvement in regard to either of these interests, would swell to a vast acquisition in the aggregate.—An improvement of 5 per cent. in our agriculture would be worth to the State as much as 25 or 50 per cent. in any other leading interest. To secure such improvement generally, that information which leads to improvement must be generally diffused; and to promote it by means of a better education, those most enjoy that better education, who are to own the farms and do the work. The mass of such cannot go to our Academies and High Schools; what school instruction and discipline they get, must be had in the agricultural districts and common schools. For them, therefore, and for the agricultural improvement of the State through them, improvements in our common schools are especially needed.

We therefore present to the people of the State a Journal devoted to these two great interests. We shall aim to show that great improvements are practicable in both: and hope to do something to aid our readers in securing such improvements.

Is this Paper a Plan of the Publishers?

No. It is proper to say that the publication is commenced at the suggestion and in compliance with the wishes of gentlemen interested in education and in all efforts to advance the prosperity of the State. Among them we name Governor EATON and J. P. FAIRBANKS, Esq., who had considered and decided upon the plan of the Journal, substantially as it is now before the reader, before it was communicated to us. But for the interest which they have manifested in it, and the assistance which they offer, it would not have been published. We say this in order to place the undertaking in its true position before the community, as having originated in the most honorable public spirit.

The Need of this Journal.

The inquiry may arise whether, among the numerous publications already existing, another like this is needed? In reply we remark:

1. That some of the most intelligent and active friends of Education and Agriculture in the State, having carefully examined the subject, are of opinion that such a Journal is highly important.

We do not suppose that the mere opinions of any number of men, are to be taken as decisive in any matter; but the fact that intelligent men have felt the need of such a paper and set themselves to bring it into existence, is an indication that a need of something of the kind actually exists; for such men do not act without reasons.

2. Within the two last years the people of Vermont have been placed, by our legislature, in a position relative to both the objects contemplated in this Journal, which they have never before occupied. We refer to the existing school law, the law authorizing the geological survey of the State, and that making appropriations to Agricultural Societies. The objects contemplated by these enactments, all must admit to be of immense interest to the people. And for the attainment of them, is it not necessary to awaken a more lively interest and to diffuse information which the great mass of the community do not now possess? But through what medium is this information to be so diffused? By what agency is this new interest to be excited? There are good Agricultural papers from New-York and Massachusetts which circulate widely among us; but after all, they do not reach the mass of the community; nor can they, from their character and price, be expected to reach multitudes to whom we hope our Journal may be welcome and useful.—There are papers published in Vermont which contain not a little good agricultural reading; but they too, being occupied for the most part with other subjects, and for other reasons, fail, and indeed do not aim to accomplish the object before us.

In relation to the cause of Education, the case is still more plain. There are few papers devoted to this subject taken in the State; nor do any of the papers published among us, aim to accomplish even so much as they do in regard to agriculture.

3. It is known that there is a diversity of opinion in relation to our existing school law, that a few regard it with distrust, while others do not hesitate to declare their opposition to it. That there are defects in the law is doubtless true; and yet that it contains the germ of incalculable good to the rising generation and to the State we think unquestionable. If the necessary information could be generally disseminated, we are sure it would do away objections and secure greater confidence and unanimity. We know of no way in which this can be done so effectually as by the general circulation of a paper in which the friends of Education can spread their views before the whole community, and convey them, in a convenient and cheap form, to their neighbors' firesides. We think therefore that our Journal presents the friends of Education a means of making a powerful impression on the public mind, which they cannot but regard as in the high-

most degree desirable, but which they have never before enjoyed, and for which they would seek a substitute in vain.

For the School Journal.

School Teachers.

As is the teacher so is the school. If the teacher is qualified for the task, his school, as a general thing, will go on prosperously. And every teacher should be thoroughly prepared for his work. In other pursuits men qualify themselves for the duties of their calling. The lawyer, the physician, the clergyman, each spends years in preparing himself for the duties of his profession. Are the duties of a school teacher less difficult, or less important, than the duties of a clergyman, lawyer or physician? And shall the one enter upon the labors of his calling with little or no special preparation, while the other must spend years in earnest and diligent study? Even the mechanic is obliged to learn his trade. The tailor, the hatter, the shoemaker, the blacksmith, the carpenter, must each serve an apprenticeship, must learn his trade, before he attempts to establish himself in business. No one would think of employing a man to make him a coat, or a hat, or a pair of boots, or to build him a house, or shoe his horse, unless he had previously made himself acquainted with the business, and prepared himself for the work. Is less preparation necessary to unfold the powers, to inform the minds, to mould the character of children and youth, than is required to give form and shape and coloring to wood and iron and stone? Would a wise man seek a skilful workman to shoe his horse, or to build him a house, and employ a novice to teach his child? Would a prudent man secure the services of an able physician to cure the diseases of the body, and employ an ignoramus to inform the mind of his son or daughter? Perhaps there is no calling or profession which requires so rare a combination of talents and attainments in order to complete success, as that of a school teacher. And a successful teacher should be regarded as holding one of the highest and most honorable stations in society.

But how and where are the teachers of our schools to be qualified, well and thoroughly qualified, for their arduous duties? What institutions have we among us, that can accomplish this work? Can we rely on our colleges? They educate males only. Can we depend on our academies and select schools? Have they hitherto done this work? Is there reason to suppose they will accomplish it in future? That they have not done it, is certain. They were not established for that special purpose. Their teachers have had too many other things to do, to allow them time to attend sufficiently to this. I trust that in future they will do more than they have done, to give to teachers the needed training and instruction. Still, we ought not to expect from them all we need. We need schools established for the express purpose of teaching the teachers—of preparing young men and young women for the office of thorough and successful educators of the young; schools which shall have this for their great and chief, if not sole, object.—Teachers' Institutes, well conducted, can do much to

effect the desired object: and they should be held in every county in the State. But more permanent institutions are necessary to effect the object fully. A few Normal Schools are needed in the State. At least three should be established forthwith; one in the central part of the State, and one towards each extreme. And who will set these on foot? Shall they be established by private enterprise, or at the expense and under the direction of the State?

A. B.

Brattleboro, March, 1847.

Letter to School Children.

The following Letter, addressed by Professor HADDOCK, Commissioner of Common Schools in New Hampshire, to the school children of that State, is equally appropriate to those of Vermont.

LETTER.

MY YOUNG FRIENDS: It would give me true happiness to see you all, and to converse with you upon the subject of your education. The State expends a very large sum of money, every year, for the instruction of youth; many of its most intelligent and virtuous citizens are engaged in the business of teaching; and the parents and friends of the young all over the State are feeling a lively interest in their improvement. The newspapers now speak of the subject oftener and with more hearty zeal than ever before. And all good men and true patriots begin to see, that nothing is more worthy of the general attention and encouragement of our people, than the education of their own children.

I am employed, you know, as Commissioner of Common Schools. My object, in this office, is to do what I can to make these schools better than they have ever been, and to induce all children to attend them.

I am, this winter, calling Common School Conventions in the most convenient places in the State, and addressing the friends of the young upon the subject of the Schools. I have lately sent a letter to every school-master and school-mistress, which, perhaps, your teacher has read to you. I send this letter to you; and I hope that every member of the school, as he hears it read, will consider it addressed directly to him. The members of this school are part of the children and youth of New Hampshire, for whose benefit so much money is spent and so much anxious care endured.

My object is to give you some advice; to induce you to do what you can, yourselves, to make the instruction given you, this winter, of important and lasting use to you all.

Do not forget, that something depends on you. The best master in the world, and the best books, and the best school-house, will not, altogether, force you to be wise and good. If you choose to be ignorant and vicious, in spite of instruction, not much can be done for you. If you intend to learn, and really wish and strive to improve, you may help to keep a first rate school. It depends as much upon the scholars as it does upon the teacher, whether the school

shall be good or bad. And every boy and every girl should go to school every morning with the feeling that they have each a part to perform, a duty to do, that day, *in keeping the school*; and that if it is not a quiet, useful, happy day to all, the fault may be partly their own.

Did you ever think that you have *DUTIES*? That your duties are just as binding, and just as important to you, as the duties of a man are to him? That, within your sphere, as a child, even the youngest of you, is as really responsible to God, as you ever will be? He does not, indeed, require you to fill the place of a man or a woman; but He does require you to fill the place of a child—to do every thing that belongs to a child, as perfectly and as conscientiously as you should do the duties of manhood, when you grow up. It is a great mistake to suppose that the faults of the young are of little consequence, because they do not much affect the world. And grown-up people sometimes very unwisely talk of the follies and even the vices of their childhood—their mean tricks, their sly, mischievous, wicked practices, as “harmless sport,” “innocent fun,” “sowing their wild-oats;” or at worst, as indiscretions which time has corrected. It may be, that time will correct the worst faults of youth; but it does not always; it does not often; it more frequently confirms and increases them. They that sow wild oats, must expect to reap wild oats. “The child is father of the man.” This being always *about* to live as we should is a great delusion; he that is actually doing wrong now has no reason to expect that he ever will do right. The idle, vulgar, false, cruel, wicked boy is on the way to a useless, vicious manhood, and a miserable age. How can you hope to escape ruin, when you follow a path that leads no where else.

A virtuous boy! a faultless child! of gentle manners, of pure words, of a soft voice, of a sweet spirit, studious to know, and faithful to do, open, generous, just—is any thing so beautiful!—so full of praise!—the very bud and flower—the fragrant spring of life.

To the elder scholar let me say, Place your mark high. Do not doubt that a substantial, thorough education, sufficient for all the ordinary pursuits of life, may be acquired in the district school. You need not be all winter in getting to the Rule of Three, and then go over the same ground again another year.—You may finish Arithmetic, and obtain a respectable knowledge of Geography, Grammar, Algebra, Geometry and Physiology, without leaving the Common School; may become good readers, writers, and accountants, and may acquaint yourselves with the Constitution of your country, and the Laws of your moral being.

The love of study can be created; it will come infallibly, with diligence and patience. And then how easy, how natural, how delightful it becomes to learn.

But there are some things which you must not do, if you mean to be true scholars. You must not spend your leisure hours about taverns, or stores, or shops; you must not waste the long, and fruitful evening in noisy, vulgar plays in the street, with the profane, the dissolute, the reckless, calling after strangers, and annoying peaceable citizens.

You must not be ashamed to be polite. A coarse, gross, rude address never expresses a delicate, thoughtful, regulated mind. You must not be afraid to be right. Boys are often tempted to show their courage by ridiculing merit. They sometimes think it mean to be afraid of offending their parents, or their teacher, or God himself. Remember that true spirit consists in following the dictates of a noble nature; and that he is the real coward who can be shamed out of his principles.

You must not find your best pleasures away from your own homes. I am always afraid of a boy who begins to be uneasy at home. When the presence of your parents and your sisters puts a restraint upon you, and you feel shy of them, be sure all is not right. An uncorrupted, unperverted child is no where so happy as at home. Never suffer yourself to lose, never allow any body to taint in your bosom the fond and kindly affections, that grow up and shed their odors round the family fireside.

You must not take pleasure in inflicting pain. It is the spirit of the Devil.

You must not imagine that you and your teacher have different interests. He labors for you; he lives for you. His interest is in your welfare; his honor is in your progress; his happiness in your highest good. If you could disturb his plans and hinder his success, you would triumph in your own defeat.

You must not tempt others to do wrong. It is enough to lose advantages for one's self; to fail of the great ends of all education. To be the occasion of misleading and injuring another—to set about corrupting an innocent mind—to lure a guiltless, confiding child from the path of purity—to estrange an affectionate nature from the love of truth and the sacred endearments of home—there is deep, deep guilt in this unnatural, malignant influence.

To you all let me say, be punctual. If a scholar is late, the whole school is disturbed; his own progress is interrupted; the order of the day is interfered with; and, what is worst of all, a habit of punctuality is not formed, a habit essential to the success and happiness of life. A LITTLE TOO LATE is a fit motto to be inscribed upon the tombstones of half the unfortunate in the business of this world, and of more than half who fail of the happiness of the future.

Take pains to comply exactly with the regulations of the school. Do not take it for granted that what is required is unreasonable. Confide in the teacher; respect the opinions he has deliberately formed; suffer him to rule within the sphere of his duty.

Be not in haste to advance. Cultivate carefully the ground you go over; be sure you obtain distinct, clear ideas; and dwell upon a thing till you master it. Then, and not till then, you may safely advance. Let others be in this class or that, upon this or the other study, using such and such books, it matters not to you; if you are not prepared for them, they are not the class, or the study for you; to be put into them would only embarrass or confuse you, and tend to defeat the best objects of a good education. For, next to not knowing any thing, and, I have thought sometimes, worse than not knowing any thing, is the crude half-knowledge of persons who have been urged

forward faster than they are qualified to go. Carrying a burden too big for one's legs may make him a cripple all his days.

Don't whisper; don't whisper. One thoughtless boy, one careless girl, may, by this one mischievous habit, disturb a whole school. Learn to study without *buzzing*; to think without moving the lips. It is easy, after a little practice. Indeed, to be able to be still is almost a virtue; it is as necessary to order. Certainly, it is one of the *graces*. A boy who can sit still and stand still, without twisting and wriggling, or fumbling in his pockets, or drumming with his feet or his fingers, has made a good deal of an acquisition. He can move with ease, and speak with composure. He can appear in a room full of company without feeling embarrassed, and rise, or sit down, without awkwardness.

Never make light of a serious subject, nor trifle with the misfortunes of a fellow-creature.

Never sneer at a tender conscience, nor laugh at the scruples or the weaknesses of a pious heart. Contempt for principle is an affliction; nobody really feels it; and simple goodness is too rare not to be prized and cherished wherever it appears.

Do not think that in this long letter, I am trying to persuade you to put on the soberness and gravity of age, while you are yet children. I know all about the vivacity, the sprightliness, the buoyancy of youth; and I love them. I would not have "a child,

Whose blood is warm within,
Sit like his grandire, and
Cut in Alabaster."

But spirit, gaiety even, is not vice; freedom is not folly; your presence may be all cheerfulness, your life all sunshine; and yet not an impure or unkind word may escape your lips, not an ungentle action mar your example, nor a guilty passion corrode your bosom.

In a few years you will be men and women. It may seem to you many years; but they will be few and short, very, very short. And then you will look back, as we do now, to your school days. Many pleasant thoughts will these days bring with them. I should be pleased to know that any thing I am now saying to you will be remembered then; and still more pleased to know that any thing I say is to make one of you wiser, happier, better. It will be worth a great deal of labor, if that labor only renders the children of New Hampshire better sons and daughters, kinder brothers and sisters, truer friends, nobler patriots, more virtuous, more devoted, more faithful servants of our blessed Savior.

Your friend, &c.,

CHARLES B. HADDOCK,

Com. of Common Schools.

N. B. Teachers are requested to read this letter to their schools.

HOW TO BE A MAN. When Carlyle was asked by a young person to point out what course of reading he thought best to make him a man, replied, in his characteristic manner:

"It is not by books alone, or by books chiefly, that a man is in all points a man. Study to do faithfully

whatsoever thing in your actual situation, then and now, you find either expressly or tacitly laid down to your charge—that is your post; stand in it like a true soldier. Silently devour the many chagrins of it, all situations have many, and see you aim not to quit it, without doing all that is at least required of you. A man perfects himself by work, much more than by reading. There are a growing kind of men that combine the two things—wisely, valiantly, can do what is laid to their hand in the present sphere, and prepare themselves withal, for doing other, wider things, if such be before them."

Saving Time.

There is a great loss of time occasioned in most schools by *waiting for answers*. A child, in nearly all cases, has got his lesson as he ought, only when he can answer the teacher's question at once. As soon as the question is put, the answer should follow like an echo. It is often the case that more than half the time of a recitation is occupied in waiting.

Prompt answering depends very much on habit; and it is a habit of immense importance out of school as well as in it, in men and women as well as in children. Not that careless and random answers should be encouraged or tolerated. We want the right answer at once. The child should be taught to think quick.

The habit of rapid thought and prompt answering may be cultivated as well as any other. We find a good exercise for this purpose in F. A. ADAMS's Arithmetic. It is in connexion with exercises in finding the *complements* of numbers,—that is, the number which must be added to a given number to make it up to the next higher order. For instance: The complement of 7!—3, because 7 and 3 make 10. The complement of 85!—15, because 75 and 15 make 100. Now follows the exercise for disciplining a class in habits of attention, rapid thought, and promptness:

"The object of the lesson is to cultivate the power of instantly associating a number and its complement together. In conducting the recitation, the answer to each question as it is given out, should be required simultaneously by the whole class. The teacher should stand before them, and require that every eye should be fixed on him. The questions should not be hurried, but the class should be encouraged to answer instantly on hearing the question. This will be easy in the first class of numbers given, which are even tens. In regard to the remaining numbers, however, which are not even tens, something more will be necessary. Suppose the question is, what is the complement of 37! it may be conducted as follows:

Teacher. What is the complement of—30!

Class. 70.

Teacher. Now listen to me without speaking; what is the complement of 30—! you observe, I am going to say something more; what will it be!

Class. Something between 30 and 40.

Teacher. Well then, whereabouts will the complement be found!

Class. Between 60 and 70.

Teacher. Very good! Now when I say 30, and

keep my voice suspended, showing that that is not all, what number can you think of, that you know will be a part of the complement?

Class. 60.

Teacher. Very well. Now listen; what is the complement of 30 —! what have you in your mind!

Class. 60.

Teacher. Well, now once more listen, and all answer as soon as you hear the question; what is the complement of 37!

Class. 63.

In the following questions, let the teacher always make a short pause between pronouncing the tens, and the units; and if the class hesitate or disagree in their answer, let the question be resolved into its elements, and each one presented separately. Thus, if 64 is the number, and the class have not answered promptly and alike, say thus,—what is the complement of 60!

Class. 40.

Teacher. What is the complement of 60 —! what do you think of?

Class. 30.

Teacher. Now answer all together; what is the complement of 64!

Class. 36.

In the examples of addition that follow,* the teacher should make a pause between the two numbers, and see that every member of the class is intent and eager to catch the second number, and answer instantly. A few questions answered by the whole class in this way, will benefit them more than whole pages recited in an indolent and listless manner."

* Any questions in addition of two numbers generally.—
Edu. JOURNAL

Theory and Practice of Teaching.

A young man was employed to take charge of a school for a few days, during a temporary illness of the regular instructor. He was a good scholar, as the world would say, and was really desirous to answer the expectation of his employers. After the regular teacher had so far recovered his health as to be able to leave his room, he walked, one pleasant day, to the school, to see what success attended the labors of the new incumbent.

A class was reciting in natural philosophy. The subject under consideration was, the obstacles which impede the motion of machinery. The attraction of gravity, as one of these, was pretty easily disposed of; for the class had before been instructed on that point. Friction came next. Here, too, the pupils, having had some practical experience of their own, in dragging their sleds, in skating, or perhaps in turning a grindstone, found no great difficulty. The book spoke a language sufficiently clear to be understood. Next came the "resistance of the various media," to use the language of the text-book.

"Yes," said the teacher, as one of the pupils gravely quoted this language, "that has no inconsiderable effect."

"The 'resistance of the various media'?" repeated one of the boys inquiringly; "I do not know as I

understand what media means."

"A medium is that in which a body moves," was the ready reply which the teacher read from the book.

Pupil. "A medium!"

Teacher. "Yes; we say medium when we mean but one, and media when we mean more than one."

P. "When we mean but one?"

T. "Yes; medium is singular—media plural."

After this discussion, which begun in philosophy but ended in grammar, the teacher was about to proceed with the next question of the book. But the scholar was not yet satisfied, and he ventured to press his inquiries a little further.

P. "Is this room a medium?"

T. "This room!"

P. "Yes, sir; you said that a medium was 'that in which any body moves,' and we all move in this room."

T. "Yes, but medium does not mean a room; it is the substance in which a body moves."

Here the lad seemed perplexed and unsatisfied.—He had no clear idea of the meaning of this new term. The teacher looked at his watch, and then glanced at the remaining pages of the lesson and seemed impatient to proceed, so the pupil forebore to inquire further.

The regular teacher who had listened to the discussion with no ordinary interest, both because he admired the inquisitiveness of the boy, and because he was curious to discover how far the new incumbent possessed the power of illustration, here interposed.

"John," taking his watch in his hand—"would this watch continue to go if I should drop it into a pail of water?"

"I should think it would not long," said John after a little reflection.

"Why not," said his teacher, as he opened his watch.

"Because the water would get round the wheels and stop it, I should think," said John.

"How would it be if I should drop it into a quart of molasses?"

The boys laughed.

"Or a barrel of tar?"

The boys still smiled.

"Suppose I should force it, while open, into a quantity of lard?"

Here the boys laughed heartily, while John said "the watch would not go in any of these articles."

"Articles!" said the teacher, "why not say media?"

John's eyes glistened as he caught the idea. "Oh, I understand it now."

His teacher then said that many machines worked in air—then the air was the medium. A fish swims in water—water is his medium. A fish could hardly swim in molasses or tar. "Now," inquired he, "why not?"

"Because of the resistance of the medium," said John, with a look of satisfaction.

"Now, why will a watch go in air, and not in water?"

"Because the water is more dense," said John promptly.

"Then upon what does the resistance of a medium depend?"

Here the new teacher interposed, and said that was the next question in the book, and he was just going to ask it himself. The regular teacher put his watch into his pocket and became a spectator again, and the lesson proceeded with unwonted vivacity. The difference between these two teachers mainly consisted in the fact, that one had the ingenuity to devise an expedient to meet a difficulty whenever occasion required, the other had not.—*Page.*

RECREATION. Recreation is a second creation, when weariness hath almost annihilated one's spirits. It is the breathing of the soul, which otherwise would be stifled with continual business.

Spill not the morning (the quintessence of the day) in recreation; for sleep itself is recreation. Add not therefore sauce to sauces; and he cannot properly have any title to be refreshed who was not first faint. Pastime, like wine, is poison in the morning. It is then good husbandry to sow the seed, which hath lain fallow all night, with some serious work. Chiefly, intrench not on the Lord's day to use unlawful sports; this were to spare thine own flock, and to shear God's lamb.

A SWARM OF BEES. Be quiet. Be active. Be patient. Be humble. Be prayerful. Be watchful. Be hopeful. Be loving. Be gentle. Be merciful. Be gracious. Be just. Be upright. Be kind. Be simple. Be diligent. Be lowly. Be long suffering. Be not faithless, but believing, and the grace of God be with you.

"A donkey carrying a load of books," said Amru, the conqueror of Egypt, "is as respectable an animal as the person whose head is crammed with learning that he does not understand."

Buying Apples.

Two boys, James and Robert, received six cents each to buy apples. James purchased two dozen of small Lady Apples, one inch in diameter; but Robert, more considerably, bought with his money two large Pippins, three inches in diameter. On their way to school the question rose which had made the best bargain. James contended that, as he had the most apples in number, and as they made a larger pile when placed together, he had spent his money to the best advantage; but as Robert differed from him in opinion, it was agreed that the matter should be referred to their teacher at the first convenient opportunity after they should arrive in school.

The teacher, after hearing the statement of each, requested James to compute the cubic contents of a globe one inch in diameter, and then as the apples resembled small globes in their form, to determine the number of cubic inches in 24 little globes of the same size. James, being good at figures, went immediately to work, and soon ascertained that the contents of a one-inch globe were equal to 5236-10,000 part of a

cubic inch, and that 24 such globes contained a little more than 12½ cubic inches, which his teacher told him was about the amount of solid matter his apples contained. Robert, meanwhile, had taken the hint, and calculated the contents of a three-inch globe, which he found to contain more than 14 cubic inches, whence it was evident that he had expended his money to more than double the advantage.

James, chagrined at this, and determined never to be caught so again, set himself to work and made the following table, by multiplying the diameter of each apple or globe three times into itself, and the products by the constant number 0.5236.

Diameter of apples. Inches.	Cubic contents. Inches. Dec.	Value of apples. cts. m.
1	0.5236	0 1
1½	1.2206	0 3
1¾	1.7672	0 4
1½	2.8062	0 6
2	4.1888	0 9
2½	5.9642	1 3
2¾	8.1813	1 7
3	10.8892	2 3
3	14.1372	3 0

The above principles will apply for general purposes, in purchasing plums, peaches, oranges, and all kinds of articles of a globular form. H.

—*American Agriculturist.*

THE SKIPPING ROPE. The skipping rope, a toy which is discarded by the young girl when entering a premature womanhood, but which ought to be looked upon as a necessary article in every boudoir, or private room occupied by a woman of civilized life and civilized habits, is one of the best, if not the very best kind of gymnastic exercise that I know. It exercises almost every muscle of the body. There are few women who do not neglect exercise. Men—most of whom have some necessary out-of-door occupation—men almost universally walk more than women. Thousands upon thousands of English women never cross the threshold of their house oftener than once a week, and then it is to attend the public worship of their Maker; and it is seldom that in towns the distance to the church or chapel is such as to occupy more than ten minutes in going thither.—*Dr. Robertson.*

AMUSING SPECIMENS OF MODERN SYNTAX. A New Orleans editor, recording the career of a mad dog, says: "We are grieved to say that the rabid animal, before it could be killed, severely bit Dr. Hart and several other dogs." A New York paper, announcing the wrecking of a vessel near the narrows, says: "The only passengers were T. B. Nathan, who owned three-fourths of the cargo and the captain's wife."

At the time when the Revolutionary names of the months (Thermidor, Floreal, Nivose, &c.) were adopted in France, a wit proposed to extend the innovation to our own language, somewhat on the following model: Frezy, Snezy, Breezy, Wheezy, Showery, Lowery, Flowery, Bowery, Flowy, Blowy, Glowey, Snowy.

School Diversions.

It is often worth the while for a Teacher to relieve the attention of scholars by some appropriate *diversion*,—that is, something not in the form of lessons, but furnishing at once relaxation and useful employment. We lately met with a contrivance of this kind on a teacher's table.

A box had been provided, which is called the School Post Office; in which the scholars are encouraged to deposite notes to each other and to the teacher. Replies from the scholars are received through the same channel. The teacher gives his answers as he chooses. All the notes pass under his eye; and everything improper or trifling is excluded. The members of the school are thus exercised in sundry of their faculties, and opportunity given for the teacher to communicate instruction in a pleasant way.

Among the notes that we saw, some addressed to the teacher read thus:

"About the time of the equinox we generally have a storm; what is the reason of this?"

"Will you tell me how to pronounce these words: Alfarata, Juniata?"

"What is the definition of the word Epicycloidal?"

"What is the cause of the Aurora Borealis?"

Of the inquiries addressed by the scholars to each other, the following are specimens:

"In what year did the 4th of March last come on Sunday?"

"Who was the last king of Poland?"

"Why was not smoke drawn to the earth by the attraction of gravitation?"

"Who was the first discoverer of gold?" *Answer.*

"I do not know by whom it was first discovered; but it was known as early as the time of Abraham."

Among them also is the following, which some of our young readers may answer if they please:—

"ENIGMA.

My 3, 7, 12, is a useful metal.

My 8, 2, 9, is a domestic animal.

My 19, 2, 15, is an answer that means no.

My 1, 13, 6, is what boys are sometimes called.

My 4, 5, is a preposition.

My 11, 12, 10, 11, 12, is a vegetable.

My 14, 2, 9, is a troublesome animal.

My 5, 11, is an answer.

My whole is the name of a book."

Good Manners—The Difference.

"Will you have this seat, sir, I prefer to stand," said a fine little boy, sitting in a pew, when the church was crowded, to an old gentleman, standing in the aisle.

"Thank you, my little man," said the gentleman, smiling very gratefully upon the little fellow, "and you shall sit upon my knee, if you please."

When the service closed, the gentleman inquired of him his name, and asked him, "Why did you give up your good seat?"

"Mother teaches me," said he "never to sit when an older person is standing near me."

Now look at another scene.

"Will you let the ladies have your seat, and sit

upon the bench yonder!" said a gentleman to four boys sitting together in a pew.

"I shan't," says one; "they may sit on the bench themselves, if they please," said another.

Not one of them moved. All the people near, turned and looked with surprise and disgust upon them.

"They can't be Sabbath school scholars," one remarked. "At any rate," another said, "they have no bringing up at home." Very soon the sexton came and ordered them all out of the pew. They were obliged to obey, and out they marched, with their heads hanging down, looking so sheepish and ashamed, that nobody pitied them.

Which example, children, is the most worthy of imitation, that of the lad, or the four boys? and which honored their parents most!—*S. S. Messengr.*

SOLEMN THOUGHT. We see not, in this life, the end of human actions. Their influence never dies. In every widening circle it reaches beyond the grave. Death removes us from this to an eternal world.—Time determines what shall be our condition in that world. Every morning when we go forth, we lay the moulding hand on our destiny, and every evening when we have done, we have left a deathless impress upon our character. We touch not a wire but vibrates in eternity. Not a voice but reports at the throne of God. Let youth, especially, think of these things, and let every one remember, that in this world where character is in its formation state, it is a serious thing to think, to speak, to act.

SCHOOL LIBRARIES. Hon. John Prentiss of Keene has made a donation to each of the fourteen school districts in his town, of a complete set, containing 38 volumes, of the Massachusetts School Library.—Such donations deserve commendation, as one of the most effective modes of disseminating useful knowledge.

BAD PAPERS. The warning, "Beware of bad books," is needed. There is perhaps equal danger from *bad papers*. The bad paper steals into the family. Mingled with the news of the day, and with useful paragraphs, comes the poison of profanity, licentiousness and infidelity.

AN ASTRONOMICAL PUN. When Sir William Hamilton announced to the Royal Irish Academy his discovery of the central sun—the star round which our orb of day and his planetary attendants revolve—a waggish member exclaimed, "What, our sun's sun! why, that must be a *grand sun*."

WIND. The velocity of the wind varies from nothing to 100 miles an hour. A gentle breeze runs at the rate of 4 or 5 miles an hour, and with a force of about 12 ounces; a high wind about 35 miles, with a force of 6 pounds; a hurricane, rooting up trees and destroying houses, has a velocity of 100 miles, and a force of 40 or 42 pounds on the square foot.

MILES OF BOOKS. The books in the library belonging to the British Museum occupy ten miles of shelf.

THE AGRICULTURIST.

We begin this department of our paper in the faith that great improvements in the agriculture of Vermont are practicable and probable. To justify this belief we need only mention the history of wool-growing, in which an entire revolution has taken place within, comparatively, a few years. Other instances of improvement, in crops, in methods of tillage, and in tools, will at once occur to the reader.—We are not yet at the end. We have but just begun. And our railroads, agricultural societies, and geological surveys, combine to give new impulse to improvement, and to leave behind every man who does not read, and think, and aim at something better every year.

For the Vermont Agriculturist.

Long-Wooled Sheep.

As Sheep husbandry constitutes such an important branch of the Agriculture of Vermont, every Farmer should be well informed, not only in regard to the most successful methods of raising and managing Sheep, but also in regard to the different varieties, and their peculiar qualities. Between the poorer grades of the native Sheep,—the long-legged, large-bellied, curved-backed, dog-haired, race, and the higher classes of improved breeds, there are a great variety, some of which are worthy the attention of the breeder, and others more worthy the attention of the crows.

Without undertaking to decide which particular breed are best adapted to the soil and climate of Vermont, I will simply state a few facts in regard to the long-wooled Sheep, and leave to others to decide which kind will be most for their interest to raise.—The principal varieties of the long-wooled Sheep are the Leicester, the Bakewell, or Improved Leicester, the Lincolnshire, and the Cotswold. The Leicesters have been extensively introduced into Canada, and many of them have found their way into the northern parts of our State, and, crossed with our native breed, have effected a decided improvement. The Bakewell receive their name from the celebrated English farmer Mr. Bakewell, and are an improvement of the Leicester breed. By a judicious course of selecting from the latter, such Sheep as were well formed and which possessed such points as he wished to secure, he obtained a breed of the most perfect symmetry of form, and fattening qualities of the highest order. One objection to these, is, that for mutton they become so fat they cannot be driven any distance to market without killing them. The Lincolnshire are a very large, coarse-built Sheep, with heavy fleeces of long wool, but not regarded as peculiarly valuable except for their heavy fleeces.

The Cotswold are thus described by an English writer: "They are a large breed of Sheep with a long and abundant fleece, and the ewes are prolific and good nurses. The wethers are now sometimes fattened at 14 months, when they weigh from 15 to 24 pounds to the quarter, and at 2 years old increase to 20 to 30 lbs. The wool is strong, mellow, and of

good color, though rather coarse, 6 to 8 inches in length and from 7 to 8 lbs. the fleece. The superior hardihood of the Improved Cotswold over the Leicester and their adaptation to common treatment, together with the prolific nature of the ewes and their abundance of milk, have rendered them in many places the rivals of the new Leicesters. The quality of the mutton is considered superior to that of the Leicester, the tallow being less abundant, with a larger development of muscle or flesh."

I have a small flock of Cotswold Sheep, and find them to correspond mainly with the foregoing description. They are hardy, easily fattened, thrive on ordinary feed, arrive at maturity early, and shear about six pounds on an average, and the wool is worth about 28c. when full-blood merino is worth 37½ cts. They are a peaceable Sheep, seldom leaping a fence 24 feet high. I have crossed them with a flock of native Sheep procured from Canada, probably having some remote mixture of the Leicester; and the lambs are of a very superior quality—well formed, and heavily fleeced. When taken up last fall, they were nearly as large as the old sheep, and were worth at least a third more for the butcher than the ordinary average of lambs.

The price of wool is so fluctuating, that it is a serious question, whether the safer policy would not be, for Vermont farmers to turn their attention to the raising of a breed of sheep, which will be profitable both for the fleece and for the mutton. Some parts of the State will probably be better adapted to one kind and some to another; but in many places I am confident the farmers will find it for their advantage to raise the Cotswold sheep in preference to the fine woolled, but smaller variety. J. P. F.

Wool Depots.

Measures have recently been taken in Addison County to establish a Depot for the sale of Wool. At a late convention of Wool growers held at Steubenville, Ohio, it was resolved to establish one at Springfield, Ms., and one at Wheeling, Va. One has existed at Kinderhook, N. Y. for some years. The plan, as explained by the agents of the Kinderhook establishment, who attended the Addison County meeting, is as follows:—

"There all the wool deposited is assorted into four or five qualities, then weighed and placed in separate bins. An account is kept with each depositor of the weight of each quality thus assorted, and when a lot is sold a credit is given him for his share of the purchase money. Should some lots be found in an imperfect condition as to dirt and cleansing, all proper deductions are made so as to equalize each on the sale. Advances will be made to the owner to the amount of two thirds of what the proprietor may deem the probable market value, which will draw interest, to stop when any portion of the wool is sold to the amount belonging to each depositor.

This method of assorting the wool and selling it for prices corresponding to its quality and condition may not be of any essential service for the present to those who raise the ordinary grades. But to the fine wool growers it will secure a price corresponding to the

improvement in the quality of their staples, to which they are justly entitled. The great evil which this class of wool growers have hitherto experienced has arisen from the fact that most of the wool has been sold upon an average, and to agents of the manufacturer at a price so limited that it will not allow them to offer the fair value of the finer qualities."

The subject is attracting attention in Franklin and Washington counties.

Arrangements of this sort ought not to be made without due consideration, as they involve expense, and their advantages may be greater or less according to circumstances. Would it not be better to have one or two large Depots in the State, than several small ones! The convention at Siebenville, it seems, fixed upon only one location in the whole West and another at the East. It is worth considering whether it would be expedient to maintain more than one in Vermont, or perhaps two, at convenient points on the Railroads.

Potatoes from Seed.

GRANT THORBURN, seedsman, of New-York, lately sent to the Emperor of Russia ten pounds of potato seed (from the balls) at \$20 per pound.

The raising of potatoes from the seed is beginning to attract the attention of agriculturists very extensively. Mr. N. S. Smith of Buffalo, N. Y., has raised potatoes in that way for seven years, and is said to have produced some very superior varieties. He is confident that potatoes are improved in that way, from generation to generation,—that the seed of seedlings may be expected to produce still better seedlings, and that in a few years the markets may be supplied with better potatoes than the world has yet known. In Germany, a gentleman has practised raising potatoes from the seed fifteen years, and has obtained splendid varieties, free from disease.

Mr. Smith thinks that a potato which will not yield more than 150 bushels to the acre, ought to be thrown away. He expects, this year, from his seedling tubers, 400 to 500 bushels to the acre. His seedlings become much more prolific, as well as better in quality, from generation to generation.

The potato has improved immensely, both in productiveness and quality, within the recollection of many of our readers; and chiefly by means of new varieties obtained accidentally, or without any systematic effort, from the seed. Mr. Smith attributes failures in the cultivation of seedlings, to the want of perseverance. Cultivators have not tried seedlings of seedlings, for four generations, as he has. Every generation, he says, brings both the tuber and its seed essentially in advance of its former condition. Last season, in the fourth accession, he raised 12 bushels from a thimble-full of seed,—some of the single plants having on their roots 1000 potatoes, weighing, in some instances, 7 ounces each.

TO MAKE VEGETABLES TENDER. To a gallon of peas or beans, either green or dry, add a teaspoonful of saleratus, while cooking, and they will boil tender, much quicker, and be of a bright color.—*Am. Agri.*

Vermont Premium Crops.

The following statement is compiled from such reports of awarding committees of our Agricultural Societies, as we happen to have at hand. It shows the name and county of the cultivators, and the amount, per acre, of the crops:

WHEAT.		
Name.	County.	Amount.
Asa Gallup,	Franklin,	28½ bu.
Hiram Hamilton,	Addison,	59 b. 12 qts.
Harmon Sampson,	"	39
A. Smith,	"	56
Arnon Needham,	"	40
J. T. Lane,	"	38½
John Porter,	Windsor,	35½
Elias Bates,	"	32
Crosby Miller,	"	31½
Levi Comstock,	Chittenden,	41
Chester Blin,	"	31
CORN.		
	Rutland,	135*
J. L. Lovering,	Windsor,	119
G. Winslow,	"	103
P. England,	Franklin,	101½
G. Kingsley,	"	101
A. Smith,	Addison,	113½
OATS.		
Alba Stimpson,	Windsor,	93½
James Weston,	"	80
H. Northrup,	Franklin,	63
L. Comstock,	Chittenden,	67
N. Stearns,	"	64
	Rutland,	83½
POTATOES.		
H. Bingham,	Addison,	492
J. Lane,	"	416
J. A. Warner,	Franklin,	360
	Rutland,	675
CARROTS.		
B. B. Newton,	Franklin,	960
T. Eells,	Addison,	1721
J. Lane,	"	1488
T. Conner,	Chittenden,	1209
U. Pierson,	"	860
	Rutland,	1430

The net profit, per acre, of two of these crops of corn was as follows: \$46 91, and \$39 33.

The above will serve as specimens, and as proof of what Vermont may do.

After looking over the Premium Lists of our Agricultural Societies, the Editor of the Cultivator remarks:—

"We have often thought, that in regard to climate and natural advantages, too much importance is given to the idea, that the south and southwest portions of the country are superior to the northern and New-England States. Some people, for instance, appear to entertain the belief that Vermont is located so far in the Boreal regions, that she must ever be subject to an ungenial climate, and prevented from being distinguished as an agricultural State. Perhaps a lingering idea of this kind in the mind of the writer, was

* Five applications, from 99 to 135 bushels.

one cause of the agreeable surprise he experienced when he for the first time passed through a portion of the Green Mountain State. The section alluded to is composed chiefly of the counties of Rutland, Addison and Chittenden. Perhaps there are other portions of the State of equal quality; but we can safely say, that we have never passed through three counties of any other State, where the general condition of things indicated a more independent and intelligent agricultural population.

In amount and value of agricultural products, also, it is believed that some parts of Vermont are not behind any other section of the country. It has been stated by one who had carefully examined the statistical returns, that the county of Caledonia, (the northern boundary of which is only twenty-five miles south of the 45th degree of north latitude,) produces more in proportion to its farming population, and the number of acres, than any part of the Union."

These would certainly be considered remarkable crops for any part of the country; and they indicate the spirit which we are confident pervades the farmers of Vermont to a wide extent, for the advancement of improved agriculture. Nowhere is a more general inquiry awakened, or a more liberal patronage bestowed on agricultural publications, and we cannot doubt that the legitimate results of this spirit are evinced in the prosperous condition of the farmers and the beautiful crops they obtain."

A writer in the N. Y. AGRICULTURIST states the average yield of wheat in that State to be 13 bushels per acre; average price 75 cents. In the region of Chicago, Ill., less than 10 bushels per acre; average price 50 cents, after being hauled in wagons an average distance of 40 miles over bad roads. In England the average is said to be 26 bushels per acre. What is it in Addison County Vermont!

From the Boston Cultivator.

Black Sea Wheat.

Messrs. Editors:—This is becoming a deservedly popular article of cultivation among our Berkshire farmers. The qualities that render it a proper subject of cultivation, are that it does not require so strong a soil as necessary to produce a much less amount of other kinds of spring wheat; that which will produce oats to advantage being sufficiently fertile for this grain. It requires a less quantity of seed per acre than other kinds of wheat; for while two bushels is not considered too much of them, one bushel, if the seed is plump, or five pecks of any quality, are sufficient stocking with this. It possesses unusual hardihood, being less liable to suffer from variations of temperature; super-abundant rains, or lack of moisture, or the attacks of insects.

Its yield commends it to cultivation; twenty bushels to the acre, in the last season, being, so far as we have heard, (and we have taken some pains to ascertain facts,) none above the average produce. Indeed we have not heard of more than one or two crops that were below that quantity, while in many instances, it has ranged from twenty-five to thirty, and in some cases more than that number of bushels per acre.

The only objections that can be brought against it as a grain for cultivation, are that the color of the flour is not of so pure a white as that of the Italian, and perhaps some few other kinds of wheat, it possessing a yellow cast, which in some cases merges into the tawny, and, perhaps, may not make quite so tender bread. But it is sweet and wholesome for all that, and the farmer, in these days of high prices for flour, will forget these little deficiencies while eating good wheat bread and butter of his own raising. On many farms, too, the former objection may be removed, by a choice of soil in which the grain is sowed, its color being very much regulated by the color and quality of the soil, an influence, which we believe is exerted to a greater or less degree on all kinds of grain, though some perhaps more than others. An intelligent miller, who has floured much of it, informed us a few weeks since, that the quality of flour from grain of this kind, grown on high sandy land, was at least fifty per cent. whiter than that made from grain of this kind, grown on dark loams.

Some argue that they can get their bread easier by raising wool. It may be easier, but is it cheaper? Let us see. We will in the first place charge for a barrel of flour seven dollars; as little money as will buy it in these regions, to say nothing of the time and trouble of going after it. Now estimate the wool to purchase that flour (it must be turned into cash before it will buy flour) at thirty-three cents a pound, which is allowing enough for the medium price, and how many pounds of wool are necessary to buy the flour! Twenty-one pounds, or on a liberal calculation, the clip of five sheep. Now we will allow five bushels of wheat to make a barrel of flour, and set the wheat at only fifteen bushels per acre; and then, after this liberal deduction, you must give the fleeces of fifteen sheep for the fine flour, to say nothing of the bran, coarse flour, &c., that the acre of land produced. We leave it for the farmers to say whether the acre would have *summered* those fifteen sheep, and throw wintering (not a small consideration) out of question.

Some prefer raising oats to buy their flour. This system of proceeding will admit of investigation. Let us see. At the present price of oats, forty cents a bushel (in the country) it will take 17½ bushels to buy a barrel of flour, costing seven dollars, and to buy your three barrels, or the product of an acre of wheat giving fifteen bushels, you must get fifty-two and a half bushels of oats. How much of our New England land will produce this quantity! Probably no more than will, with a little care and attention, give twenty of wheat. At any rate, you can get your fifteen of wheat as easy as you can the quantity of oats necessary to obtain it. If you do no more than this, you save the trouble of selling the oats and carting the flour, and the crop leaves your land at least 33 per cent. better for producing for the next three years, than the oat crop will, a consideration that should be brought into the farmer's estimate.

There are other considerations which might be brought into the account; but we have said enough to awaken the investigation of the inquiring farmer in this matter. Yours truly, W. BACON.

Setting Fruit Trees.

It is now time to make calculations about grafting trees and setting out new orchards. Cherry trees should be grafted in March, or they will not be likely to live. Many orchardists prefer grafting these to budding. We think grafting is best; yet many of the old and noted varieties seldom grow thrifty, on setting the scions into the seedling stocks. We ought to seek for new varieties among the Mazzards. Many of them are better than the old grafted fruits.—The Black Tartarian cherry however, always gives you a thrifty top, and this is the best cherry, on the whole, that we have seen cultivated. It is called by various names in different places, but it is the same old Black Tartarian that carries the bell, after all.

Apple trees and pear trees may be taken up soon after the frost is out, but we advise not to set them till the earth has grown warm and is dry enough to crumble when you spread out the roots. If they are kept in a cool place, the roots covered with earth, the setting may be delayed till May, or till the leaf is ready to put forth.

People are not setting orchards every year, and therefore they forget to adopt the best modes of setting. Be careful not to mangle the roots on taking a tree up; if any roots are broken, cut them off and leave a smooth end; the little fibres will start better from this than from a broken root.

It is not necessary to dig a deep hole to set trees in. We are inclined to shudder when we see the root of a tree buried deep in the cold earth. People bury deep to keep the roots from drying up and to give support to the tree. But a lot of old stack hay will guard your young tree both from winds and drought, better than deep setting and all the staking and tying up that can be contrived.

Set your tree no deeper than it stood in the nursery—let a boy hold it upright while you spread the roots out so as to let not two of them touch each other. Fill in with good mould, such as you find in the garden, or in a cornfield that was made rich, but place no kind of manure in contact with the roots. Place the manure on the surface, if any where, and this, with your hay or straw will support the tree, and keep the earth moist through the heat of summer.—There should be a good forkful of hay or straw around each tree. Straw manure from the cow yard will answer, if you have no other strawy matter.

If your old hay or straw is so dry or light as to be in danger of blowing away, place flat stones on it and keep them there. You will find that a forkful of hay, on ploughed ground, will keep the earth moist and light through the summer; and that no grass or weeds will be found obstructing the extension of the roots. If this matter has not become rotten in October, haul it back to prevent the harboring of mice at the root of the tree.

Peat muck is a good article to be placed about a tree in a dry soil. If it has been dug the previous year, some of it may be fixed with the mould that

comes in contact with the roots. Muck, fresh from the meadow, may be placed on the surface around the tree.

No grass or weeds ought to be permitted to grow within six feet of the tree the first year, and you must extend your cultivation ten feet each way if you would have your young trees flourish, and not be covered with lice and moss.—*Ploughman*.

Wash for Fruit Trees.

BY A. HUIDEKOPER, MEADOWVILLE, PA.

A good deal has been said about the best application for this purpose—one recommending lime, another a solution of soft soap, and another a solution of potash. All these are very excellent, but sometimes fail of being applied from an unwillingness in the farmer to drive to the village in search of them, or from the false economy which regards the slight expense of procuring them. If there is anything equally beneficial, and within every one's reach, we think it should be substituted, as doing away with the last apology which a lazy man can give for neglecting his trees, and we think that this article may be found in wood ashes, of which every farmer has an abundance. I have tried the solution of black salts, the application of soap, and also that of wood ashes; and so far as my observation goes, for large trees with rough bark, the latter is quite as good, if not better, than the former. A wash of ashes and water can be made as strong as you please, and if put on some dry day, a good deal of the ashes will remain adhering to the bark, which the subsequent rains wash into the crevices. This wash, if applied in the summer time, will, while the ashes remain on the tree, make it offensive and disagreeable to the insects, and deter them from lighting on it; it also ultimately makes the bark smooth and healthy.

By those who wish for healthy and productive orchards, too much attention cannot be given to the bark of their trees. We frequently meet with forest trees whose interior has been almost entirely destroyed by fire or decay, and which yet seem healthy and flourishing by virtue of a vigorous bark; and any one who has tried the experiment must have observed how both shrubs and trees, that have become enfeebled by age and neglect, can be rejuvenated by attention to their exterior condition. We don't mean to recommend to any to procure old or large trees for his orchard in place of young ones, but if he has an old apple tree worth improving, by removing the outside of the whole bark on it late in the spring, he will find that he has given to the tree much additional vigor. Upon smaller trees and shrubs a liberal scraping with a trowel and an application of ashes and water will have the same effect.

When trees grow in grassy land, a pretty good way to keep them from being sod-bound, is to remove in the fall the sod for two or three feet around the tree, and on this turn about half a wheel-barrow full of manure; the winter rains and snows will wash the strength of it down to the fibrous roots. In the spring the manure may be scattered about under the tree, and in lieu of it, substitute leached ashes. This

besides being beneficial to the tree, prevents the grass from approaching the stem of the tree during the summer; and what grass grows over the ashes is easily removed in the fall.

In conclusion we would say, that the farmer who carries his horse twice a day, finds himself abundantly rewarded for his toil, in the improved strength and appearance of his animals; why won't he *curry* his trees once or twice a year, and reap a larger reward for the labor and the capital thus invested?—*Cultivator*.

Culture of Flowers.

Flowers should be cultivated in every garden, especially if near the house; in which case, if not in every other, the garden certainly ought not to be limited to the production of vegetables merely, but should contain the ornamentals as well as the useful. Too much time and space must not, however, be devoted to flowers; and we will only mention a few of the more hardy sorts, which may be easily managed, and will be pleasing at all seasons of the year.

Climbing over the porch, or around the door, you may have a few of the hardy tall-growing roses, for ornament. Common monthly or China roses may cover the corners of your house, or be trained under and along the sides of the windows, mixed with laurustinus, arbutus, and pyracantha; nor let the honey-suckle be wanting in some corner, twisted round a tree, or hanging over a corner of the wall.

Have plants of the hundred-leaved, moss, cabbage, variegated and common blush roses in the corners of your garden nearest the house, and in the borders plant snowdrops, crocuses, red and yellow tulips, white and yellow bachelor's buttons, primroses, anemones, narcissus, cowslips, polyanthus, white and yellow lilies, wallflowers of different colors, dahlias, hollyhocks, jonquils, violets, the sweet-scented clover, mignonette, and any other annuals you like or can procure.

If you edge your flower-borders with the garden daisy, and the hardy sorts of auricles, there will be few days in summer and autumn in which some pretty little flower will not peep forth, and afford you pleasure in looking at it. A holly, (an American one North, or a European South,) box, laurel, or rhododendron, will do well under shade, and their perpetual green will refresh your eyes in winter; and be assured that such objects as a garden presents, if it be neatly kept, are always valuable; for they do the heart good, and impart a kindly tone of feeling and refinement, and serve to keep out evil thoughts.

Encourage your children in a taste for flowers.—Teach them to plant the seeds and roots, and to weed and keep them clean, and train and cultivate them; and the taste will remain with them when they grow old. It is on such things as these, in the recollection of bygone days, that local attachment is founded, making us delight to revisit the scenes of our childhood, and bringing back the wanderer from distant climes, to seek a last resting place in the home of his fathers.—*Am. Agriculturist*.

Legislative Agricultural Society.

THE PROFITS OF FARMING.

Mr. Denny said, that in considering the profits of farming we need not undervalue other professions. Manufacturers, mechanics, merchants and farmers were inseparable to their interests. This was an age of excitement. Men were eager to get rich. And there was a disposition among our young men to choose such employments as were regarded as least laborious, and which promised best for the speedy acquisition of wealth. Hence, farming was neglected: for it was a common opinion, entertained even by many farmers themselves, and inculcated on their children, that farming was an unprofitable business. And yet, it was a fact not to be denied, that our ships were freighted and our stores filled with the products of the farm.

The products of the farms in New York alone, including grain, potatoes, peas, butter and cheese, were estimated at \$50,000,000; the hay crop was worth nearly as much more. The capital invested in neat stock, in that State, was estimated at \$20,000,000. The products of Massachusetts farms were estimated at \$13,000,000; and the capital invested in agricultural tools, stock and buildings, exclusive of land, cannot be less than \$50,000,000. The produce of the cow, alone, consumed in the city of Boston was equal to a dollar a minute for every minute in the year. A business for the products of which there was such an enormous demand, if managed with skill and energy and industry, could not be unprofitable. Let the same skill, industry and capital be devoted to farming that there was to manufactures, and farming would produce much greater profits, and at a much less expenditure of physical and intellectual labor and suffering. To farm profitably a man should be educated. His mind should be cultivated. It required more talent to be a first rate farmer than it did to be a merchant or manufacturer.

He knew farmers who had accumulated \$20,000 and even \$40,000 by farming. And in all our farming towns men were found depositing their hundreds of dollars on interest. This, however, was a bad investment. A merchant or manufacturer did not manage in this way; he invested his earnings in his business. So should the farmer, and he would make more money by the operation.

It was wrong, in estimating the profits of a farm, to take a single crop. One crop might be poor. The profits of the whole farm should be considered. Much was said at the last meeting on the question whether there was any profit in raising corn. He believed that there was profit in raising this crop, even when all the labor was hired, and the price of corn was small. He knew a farmer who paid \$21.50 an acre for planting and raising a crop of corn; the acre yielded but 45 bushels—a small crop—and yet this crop, at 60 cents a bushel, only, paid for cultivating, and more than 6 per cent. on the land, counting it worth \$100 an acre. The same farmer let out 28 acres of grass land to be cut, the hay made and delivered in the barn, for \$3 a ton. From the 28 acres 54 tons of hay were cut, worth, at least, \$10

a ton. Now, calling the land worth \$100 an acre, and allowing 6 per cent. on this investment, would give \$168; the cost of getting the crop, was \$172, making \$340; but the hay was worth, at least, \$540, or \$900 more than the cost of getting it, and \$108 added. This would be 13 per cent. on the investment. Now, with such facts before us, it must be evident, that the application of intelligent industry and of capital to farming, must make it a profitable employment: to say nothing of the health and comfort and happiness incident to the business.

Mr. Randolph, of East Lexington, said that there were other sources of profit in farming than what could be estimated in dollars and cents. That of health was not to be overlooked; neither should the moral influence of farming be disregarded. The prejudice of the young against farming, had been alluded to.—He believed that this prejudice was *worked* into the farmers' boys by the drudgery to which they were unnecessarily subjected, from their earliest days. If farming was less profitable now than formerly, he believed it must be attributed mainly to extravagance in buildings, to idleness and to mismanagement.

Mr. Sheldon thought there was great profit in farming, from its tendency to improve the minds and morals of men. The labors of the farmer operate powerfully to raise his thoughts to God, and to make man feel his dependence on his Creator. When he dropped the seed, he was reminded that God alone could make it grow. The farmer felt that he was a co-worker with his Maker. He should never forget the effect produced on his own mind by seeing a field of corn, which he had been hoeing, cut down by the frost.

Mr. Wheeler, of Framingham, remarked on the importance of a suitable education in order to render farming pleasant. A man that understood something of geology, agricultural chemistry, botany, &c. would find farming a much more pleasant employment than he did who had no such knowledge. He said a boy that went to school only ten or twelve weeks in the year; and labored the remainder of the time on the farm, would make more progress than the boy who was kept at school all the year round. The whole man was better educated.

To make farming profitable, such articles should be cultivated as would sell well. Apples, peaches, and vegetables, were all very profitable. A farmer in Delaware, last year realized \$20,000 from his peach orchard. An apple raiser on the Hudson river had 20,000 trees, and sold his apples in Europe at the rate of from \$9 to \$12 a barrel. Peaches in this market, last year, though the crop was very abundant, brought from \$1 to \$4 a bushel, and from 25 cents to 8 shillings a dozen.

Mr. Merriam dilated on the advantages and delights of farming, as a source of permanent income and satisfying pleasure. He regretted, however, that improvements in agriculture had not kept pace with those in the manufacturing and other arts. We needed professors and lecturers on agriculture in this country, as they had in Prussia and other European countries.

Mr. Schouler, of Lowell, spoke of a farm near Cambridge, Eng., of 500 acres, which was rented at

a guinea an acre. The owner was a great breeder of South-Down sheep, and had rams which were valued at 200 and 250 guineas apiece. The yearly fleeces of his ewes averaged 8 pounds each, and of his rams 9 pounds.

Mr. Clark, of the Senate, said if manufacturers had managed their business with as little skill as farmers had, they would all have been bankrupts long ago.—The manufacturer consulted the market, and made such articles as would sell; the farmer did not generally regard the market; some did, and made money. He spoke, also, of the vast amount of waste land that was valueless now, which might be reclaimed, and some of it made the most profitable land in the country. He knew from personal experiment, that bog lands might be made to pay 25 per cent., by reclaiming them. During an acquaintance of 36 years with farmers, he could not remember an instance of failure where the man had confined himself to farming.

The discussion of this prolific subject is to be continued at the next meeting.—*Boston Traveller.*

SELECT WINTER APPLES. A writer in the Horticulturist (S. H. Smith, Smithfield, R. I.) says that "all the winter apples raised in New-England are not collectively worth so much as these three kinds"—R. I. Greening, "first for health of tree, bearing, table, keeping, and cooking;" Baldwin, "good for bearing, table, and keeping;" Roxbury Russet, "good for bearing and keeping." He adds that he has grown and tested 150 kinds, and has come to this result.

From the New-Hampshire Sentinel.

Labor-Saving Soap.

Take 2 lbs. sal. soda, 2 lbs. yellow bar soap, 10 quarts water, or in like proportion. Cut the soap into thin slices, and boil all together two hours; then strain through a cloth into a tight box or tub—let it cool, and it is fit for use. It should be placed in the cellar, covered pretty close,—freezing injures it. It should not be made in an iron boiler, but in a brass kettle, or in a copper boiler, tinned. It should boil moderately full two hours, care being taken that it does not boil over.

DIRECTIONS FOR USING THE SOAP.

Put the clothes in soak the night before you wash. The next morning, put water into your kettle or boiler (a boiler with a cover is best) *one, two or three* pailfuls, according to the quantity of clothes you intend to wash, (two pailfuls will be enough for most families) and to every pail of water add *one* pound of soap. As soon as the water with its dissolved soap begins to boil, wring out the clothes and put them into it without any rubbing. Let them boil *one* hour, then rinse out the suds and put them into a good supply of clean water; rinse them thoroughly and they will be clean and white. They will need no rubbing except on such places as are most soiled. The rubbing, if necessary, should be done while rinsing out the suds. If you have more clothes than you can conveniently boil at once, you can boil another set in the same suds in which you boiled the first, with equal success.—

The suds should be saved, as they may be used in cleaning up.

Colored and woolen clothes must not be boiled as above, but they may be washed in the suds, duly weakened with water.

Six pounds of sal. soda, 6 pounds of bar soap, and 30 quarts of water will make 50 pounds of the soap. The expense will be about 2 cents per pound. A pint measure will hold a pound of the soap, or a quart measure 2 pounds. The soap may be crowded into the measure without much force, and thus the trouble of weighing every time you wash, may be avoided.

The advantages of using the above soap are,—1, much less hard work; 2, less time; 3, the clothes will last longer; 4, the hands are less injured; 5, less expense for soap, if the materials are brought as cheap as they are often sold,—say 6 cents per pound for soda, and 7 cents for bar soap.

The experience of nine years has fully verified the utility and economy of the above mode of washing.—The philosophy of the process is too obvious to require explanation. Let it be tried carefully and faithfully, and success will be certain. Some persons find trouble in changing from the old mode, and give up before a faithful experiment has been made. Perseverance with suitable utensils will overcome all the difficulties. N. H.

Our Lady readers may put implicit confidence in the statements of 'N. H.'—Ed. SENTINEL.

BOILED RICE is made a more economical dish by saving the water in which it is boiled, for food in some other form;—as, for instance, in wetting Buckwheat cakes, which it makes delicious and more nourishing.

Family Jars.

Jars of jelly, jars of jam,
Jars of poiled beef and ham;
Jars of early gooseberries nice,
Jars of mince-meat, jars of spice,
Jars of orange marmalade,
Jars of pickles, all home-made,
Jars of cordial elder-wine,
Jars of honey, superfine.
Would the only jars were these
That occur in families!

Think of This.

Doubtless many of our young friends will be glad to give a quarter of a dollar a year for this paper themselves, and also to obtain subscribers for us.—Three small boys lately obtained in a few hours, 100 subscribers for another cheap paper, in a village in Connecticut. Every number will have articles prepared expressly for the young; the whole object of the *SCHOOL JOURNAL* is to furnish them better teachers and schools, and other means of improvement;—and the Agricultural Department will contain much that they will think curious, and a great deal that they will find of use in their work, and when they have farms of their own.

To obtain subscribers you need only take a copy of the paper in your hand, and go to each house, where

you may expect to find some member of the family who will hand you 25 cents for a years' subscription.

In this way you would do more good than a dozen idle and selfish men, and return home at night with the feeling that you are of some use in the world.

Should our returns show that there are a few such boys in every town, we should regard it as new evidence that Vermont is destined greatly to prosper in their days.

Number of Subscribers to be obtained.

1. Some British Journals have circulated from one to two hundred thousand copies of their weekly or monthly numbers. Some monthly papers in this country 50,000, 60,000, and more, are sent out. In some towns in Vermont more than one hundred copies of the *CULTIVATOR* are taken; and in others, a hundred copies of a city paper not worth a hundredth part so much.

2. The expense of this paper will be little more than nominal; and it is put at this low rate, for the express purpose of removing all objection to taking it on the ground of expense.

3. The numbers, carefully preserved, will make, at the end of the year, a volume of about 200 pages of permanent value, and containing more than volumes that cost at the Bookstores four or five times as much.

4. No other journal can supply its place; and it interferes with no other.

5. It addresses itself, in one or both of its departments, to all; and each number will contain matter in which every man, woman, and youth, may reasonably be presumed to take a lively interest.

6. The object of the paper will be accomplished in proportion to the extent of its circulation.

7. To circulate 10, 15, or 20 copies to a town, on an average, and those perhaps among persons who take other educational and agricultural Journals, would hardly be worth the trouble, in any view of it. It can accomplish its object only by reaching every school district, and the people generally of every district.

8. He that would do the plan justice, therefore, in the way of circulating the Journal, should present it as a paper that everybody is expected to take, of course; and should aim to have it reach every family in his town or district.

TO CORRESPONDENTS. Please let your articles be—

1. Frequent.—2. Brief.—3. Pointed. Aim to give such a form to what you have to say that it shall be—
1. Read.—2. Remembered. When one speaks to many thousands, he can afford to take some pains.

YOU NEED NOT SEND THE NAMES of individual subscribers (except when copies are ordered singly.) but only the name and address of the person to whom the package is to be directed.

THE PROSPECTUS has been printed on a separate sheet, and copies will be forwarded to those who may wish to use them.

PAYMENT IN ADVANCE must always accompany orders. The publication of the paper for at least a year, is secured.

ARRANGEMENTS FOR DISTRIBUTING THE JOURNAL.

To facilitate the distribution of the JOURNAL, we propose to send packages, monthly, to some convenient points, (as Brattleboro', Rutland, Woodstock, and Montpelier,) from which packages for the towns around, may be conveniently obtained. And wherever the paper shall be generally introduced throughout a county—or even as many as 500 copies taken—we will be at the expense of transporting them to some central point in such county. *Town packages* will be done up, addressed according to order, and enclosed in these large packages.

SEND IN YOUR ORDERS EARLY. The sooner we receive them, the more convenient for us; and we particularly request that they may reach us as soon, at the latest, as the 20th of May. Even if their arrangements should not be quite completed so early, we must ask our friends at least to report progress.

COUNTY AND TOWN SUPERINTENDENTS. From several of the COUNTY SUPERINTENDENTS whom we have been able to consult we have received assurances of hearty co-operation. They will do what they can to circulate the Journal, and to furnish for it appropriate communications. The same important aid, in both ways, will doubtless be given us from all the Counties.

TOWN SUPERINTENDENTS, we think, may make the Journal as important a means of improvement in the schools, as any within their reach. They cannot visit the schools *often*; but they can make such arrangements that every teacher shall have the JOURNAL *monthly*, and every district be supplied with at least a few copies,—enough to keep alive the spirit of improvement, and fix attention upon the schools.

WOULD NOT THE PRINCIPALS OF OUR ACADEMIES be doing a good work, were they to engage their intelligent pupils in the circulation of this JOURNAL during their Spring vacation? The enterprise—the improvement of the Schools and the Agriculture of the State at this important juncture—is large enough to elevate and expand the mind, if one only *thinks* of it; and no employment furnishes a better discipline than to labor, with public spirit, for a good object.

A WORD TO TEACHERS. Teachers who have kept school know that one of the greatest difficulties in their way is—a want of interest, indifference, in parents and children. To break up this, and to make schools the centres of a more lively interest, is a leading object of this paper. Can Teachers do better, than to endeavor, at the outset, to get the people among whom they teach, to read it! This they may do by personal application themselves, or by enlisting some of the older children. It will be found to be a paper that school-children themselves will in many cases like to take.

PROSPECTUS

— OF —

The Journal and Agriculturist.

THIS Paper is devoted partly to EDUCATION and partly to AGRICULTURE and DOMESTIC ECONOMY. The two Departments are kept distinct, each occupying about half the pages; and the object is, to excite interest and diffuse information in regard to these two great interests.

THE SCHOOL JOURNAL embraces Education at home and at school, from the earliest childhood upward, but is devoted more particularly to topics immediately connected with Common Schools, as an institution of the State—their social and political relations—the standard and aim of popular education—the location construction, warming, and ventilating of School Houses—methods of teaching and government—studies—attendance—books and apparatus—duties of parents and committees—qualifications and duties of teachers—Teachers' Institutes—School Conventions—moral training and discipline—duties and employments of scholars—family preparation for school—interesting and instructive questions for children in the school and family—the discussion of the school law of our own and other States, &c. &c.

IN the conduct of the AGRICULTURAL Department, the employments and prospects of the mass of the people of Vermont, and the new relations to the markets by Railroads that are about to present themselves are kept in view. Leading topics: Wool-growing—the Dairy—the raising of Beef, Pork, and Mutton—Grain crops—Roots—Fruits—Bees—Gardening—Agricultural implements, experiments, improvements—the Markets—Domestic Economy—with the application of science in the various pursuits of the farmer and the farmer's wife.

Published Monthly, 16 large octavo pages in each number, making a volume of about 200 pages annually.

TERMS:

For a single copy,	- - - - -	50 cents.
5 copies, sent to one address,	- - - - -	2 00
10 " " " " " "	- - - - -	3 00
16 " " " " " "	- - - - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

PAYMENT to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers *not* written on their papers) and to be sent only so long as they shall have been paid for.

BISHOP & TRACY.

Winston, April 8. 1847.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. I.

WINDSOR, VT., JUNE, 1847.

No. 2.

THE SCHOOL JOURNAL.

Mind among the Farmers.

In 1793, a Board of Agriculture was established in England, and agricultural surveys of all the counties were immediately commenced. As this was before the birth of Agricultural Chemistry and before the necessity of Geology as a basis of a thorough agricultural survey, was understood, the reports consisted of little more than exact details relating to practical operations in every department of rural economy. These details were exceedingly voluminous; and the substance of them embodied by Marshall in his "Compendious System of British Husbandry," fills fourteen volumes! Thus was introduced a new era of Agricultural improvement; and if the wheat crop of England has improved from an average of 17 bushels to an average of 26 bushels to the acre in 25 years, it is only one example of results that are witnessed in every county in England and in every department of rural industry.

With a territory not a third as large, a population only half as numerous, a soil and climate less propitious, the agricultural products of England are four times as great as those of France. This astonishing difference is owing entirely to superior methods of tillage; to the application of science and skill—of *mind*—to agriculture.

In many parts of Europe, the implements of agriculture and the whole process of tillage remain as they were described by Roman writers near two thousand years ago. This is to a great extent true in some departments of France, although much has been done there within twenty or thirty years, by the establishment of societies, experimental farms and gardens, &c. What new beauty and fruitfulness might be made to clothe those naturally delightful regions, under the management of an educated, active-minded, intelligent rural population! Our intelligent farmers—possibly using some slight hyperbole—sometimes say that half the strength required a few years ago, is saved by improvements that have been made in plows, hoes, pitchforks, &c. &c.

As was mentioned above, the first great impulse to agricultural improvement in England, was given by collecting and publishing facts,—showing where and how failures occurred, and where and how labor received its richest reward. Thus the skill of the best farmers was made available for all who could read.—So it has been in this country; and so it must continue to be to a very great extent. The diffusion of such

knowledge by means of the press and of agricultural societies, must always be a principal means of improvement. And he will be marked as the successful farmer, who embraces in his grasp the widest field of knowledge, with the judgement and tact to apply that knowledge most advantageously to his own affairs.

But another new era has dawned upon modern agriculture. Chemistry and Geology have become its handmaids, and offer services of the extent of which no adequate estimate can yet be formed. They promise to tell the farmer what he can do to best advantage with every field in each successive season. They will save him from the blunder of putting lime on land that contains lime enough already; and direct to the *kind* of manure needed to complete the assortment of materials which each proposed crop needs to feed upon and perfect itself.

The farmer too—at least among us—is entering into new relations to the markets. The railroads are about to place him in such a position that, to prosper, he must be able to direct his attention quickly and intelligently to new sources of profit, and new facilities for making the most of his means.

For instance: Boxes are now sent from Boston to Greenfield, and then distributed among the farmers to be filled every week with the nicest fresh butter. At present prices the makers probably get 25 cents, without any expense for transportation. Now Greenfield is farther from Boston by railroad than our Connecticut River towns will be next year, for more than half the length of the State. But such prices are not obtained in that way for poor articles. To secure an extra price, there must be intelligence and skill. And this is only one article out of a multitude to which the same principles will apply.

In view of these considerations how plain it is, that success in farming among us is getting to depend more and more upon *mind*; upon habits of intelligent observation and inquiry; upon reading and study. If he that makes two blades of grass grow where but one grew before, is a public benefactor, much more, in a country like ours, is he a blessing to the community as well as a successful man himself, who shows us how one day's work can produce the results of two. This has been often done in our own time. The use of ashes on corn is one instance; that of the horse-rake another; that of the roller, in many cases, another; that of apples for cattle and swine another. Give your asparagus a good dressing of refuse salt or brine every spring, and it will return better crops than you could procure by many days' work in any other way. Select for your orchard certain kinds of apples, and

you may have from them a hundred dollars a year, before the produce of certain other kinds (and good apples, too) treated in the same way, would give you as many cents. And so in cases without number, the mind saves the body half its work, and makes one hour's sweat of the brow worth more than two.

If we would have a generation of successful farmers, therefore, they must be educated to read, think, inquire, and exercise their own judgement and ingenuity. This can be done for the great mass of our youth, only by means of our common schools. In them they must learn the art and acquire the power of learning; for it is with the mind just as with the body; it must be exercised if it is to have strength and activity, and it must be used to reading and thinking in order to do either to advantage.

We cannot now pursue this subject. These hints will suffice to show how intimately connected the improvement of common schools is, with the general improvement of our agriculture.

Reading.

The habit of reading with proper emphasis and cadence should be commenced as soon as the child begins to spell out the words of a sentence. After he has gone laboriously through a sentence, spelling out slowly word after word, let it be read properly by the teacher, and repeated after her by the child. In this way the child will become accustomed from the first to enter into the spirit and meaning of what he reads. This is one rule.

Another is, that the child should read the same lesson many times, till able to go through it without hesitation. No man or woman could read properly a paragraph, the words of which were not so familiar and the meaning so plain as to leave room for no hesitation in regard to either. And so it is with the child. He may be taught—and should be so, as before remarked—to repeat after the teacher with proper emphasis, tone, and cadence, what he spells out; but in order to read as he ought, he must have his lesson perfectly at command.

Many children blunder along into their teens, incapable of reading a single paragraph with ease and fluency, for want of the observance, by their teachers, at the outset, of these two rules. Thoroughness here is as necessary, and gives the learner as great an advantage, as in the fundamental rules of arithmetic, or any other study.

Fourth of July.

Masses, Editors:—I would take the liberty to suggest to Superintendents of schools, and others interested in the cause of popular education, the expediency of having Common School Celebrations on the coming anniversary of our National Independence. As the fourth of July comes this year on Sunday, the Saturday preceeding or the Monday following, may be devoted to this purpose.

Several celebrations of this kind, were held last year in this neighborhood, and were productive of good effects. All the schools of a town may be assembled

together in some beautiful grove, with the teachers and parents of the children and the citizens generally, where suitable refreshments may be prepared for the "outward man," and music, toasts and addresses furnished for the intellect and the heart.

The advantages of having Common School Celebrations on that occasion, are many and important. In them people of all parties and opinions can cordially unite. They bring together all ages—parents and children—teachers and pupils—young men and maidens—hoary age and lisping infancy. They bring an important subject before the public eye. They excite a deeper interest in the education of the young, and do more, I think, than any other modes of celebrating the day, to strengthen and perpetuate what is good in the institutions of our country. Yours, A. B. Brattleboro, May 29, 1847.

Spirited Educational Movements.

Among the suggestions that have been made for the improvement of our school law, one is, that the State Superintendent should have an adequate salary and devote his whole time to the duties of that single office. It is urged in favor of this arrangement, that the most vigorous educational movements have been thus conducted,—as, for instance, in Massachusetts, Rhode Island, Connecticut, and New Jersey.

The state of things in New Jersey just now is particularly interesting. We copy the following account of a late meeting of the Society of Teachers and Friends of Education in that State, in the hope that something of the same spirit may be awakened among our readers. The meeting was held at Elizabethtown.

EXTRACT.

The attendance upon the meeting was larger than usual: practical teachers and professional men being present from different parts of the State, animated with an earnest zeal in the advancement of the cause of education.

Dr. King, the State Superintendent of Common Schools being present, gave the society a succinct and cheering account of the improvement in the different portions of the State which he had visited: the anxiety felt by those heretofore indifferent, to raise the standard of education: and the large and interesting meetings he had held in various places, where he had been cordially received. When he commenced his labors less than two years ago, it was difficult for him to obtain an audience when he visited a place and made special efforts to get up a meeting; now, he has more invitations to visit distant places and address public meetings than he can comply with. He stated that Auxiliary County Societies had been formed in some six or eight counties, and in these and other counties the work was making rapid progress. He said that the apathy on the subject of education was disappearing, and he believed that the time is at hand when New Jersey would take a front rank among her sister States in this cause. Dr. King then declared his firm conviction that this new and mighty impulse had been given to the work, by the influence of this

society in which the friends of education, without regard to sect or party, had united to devise plans for the improvement of our public schools: this influence, though silent and unobtrusive had been felt all over the State: the attention of the people had been fixed on the subject, and nothing is now wanting but perseverance in the way so hopefully begun.

S. H. Pennington, M. D., of Newark, having been appointed to that service by the Book Committee, presented an elaborate and learned report, the reading of which occupied an hour, and was listened to with the most profound attention, discussing the subject of the physical education of children: affected as it is by the construction of seats in the school, too high, too narrow, without backs, &c.: by the want of free circulation and proper temperature of air: neglect of exercise, cleanliness, &c.; by the length of time employed in study, night lessons, &c., &c. Each of these points was treated professionally and in a style intelligible to the un-professional hearer, and illustrated by such facts and enforced by such arguments as to produce a strong impression that the subject has been most deplorably neglected, to the distortion of the form, the production of disease, the destruction of the constitution and the premature death of the young.

Rev. Dr. Proudfit said that he had listened with the deepest interest to the report: it gladdened his heart to know that this subject was now engaging the attention of this Society. He spoke of the systems of education adopted in several foreign countries which he had visited, and showed their effect in training men with a sound mind in a sound body.

Rev. Dr. Davidson followed with remarks to a similar purpose, and especially considered the fact that too many studies are forced upon children.

The subject was still farther discussed by Rev. Mr. Ogden, Messrs. Cooke, Lincoln, Newton, Smith and others.

The Society then took up the subject of establishing a school or schools for the instruction and training of teachers. At the request of the Society, Dr. Proudfit opened the discussion with a very able and highly interesting argument, in which he demonstrated the dignity and value of the teacher's profession, compared with any other profession, and thence argued the importance of colleges or schools in which this profession may be learned, as well as seminars in which law, medicine and divinity may be studied.

He pursued the subject at some length and was followed by many other speakers until the afternoon was spent. The Society then unanimously adopted resolutions approving of the system and appointing a committee to digest a plan and submit it at the next meeting.

A resolution was introduced and unanimously adopted recommending the School Library system in the State of New Jersey.

After the transaction of miscellaneous business the Society adjourned, having had the pleasantest and most profitable meeting which it has ever held. Its usefulness is rapidly progressive. The plans for gradual improvement of common schools are cautiously matured, with deliberate investigation and full discus-

sion, reports on both sides of every doubtful question being carefully prepared, and thus far the Society has been eminently successful in its labors.—N. Y. Obs.

"Every person," says Heinroth, "into whose company we fall and on whom we exert an influence, is, or will become in some degree, attached to us, or repelled from us, according to our behavior towards him; and afterwards, in his intercourse with us, this dislike or regard will be manifested, not always, to be sure, in words, but continually in act. Now it is the deed, the proper index of character and disposition, that we wish from every one. We secure the whole man by securing his regard; and if we have that, we have him.

"Here we have in a few words the whole course of education from beginning to end. To unlock the young soul, to attract it to one's self, to secure its affectionate regard, is the principle, and in this consists the art of all education. Yea, it is thus that the first problem in education, namely, to awaken in the young soul, faith, love, and hope, is solved."

A Hint on the Study of Geography.

The following paragraph is from 'Home Education.' Instead of discarding the particulars usually taught, it would be better, as it strikes us, to associate part of them at least, in the child's mind, with the sketches of human life which Mr. Taylor recommends:—

"Instead of requiring children to listen to, or to repeat what they will forget as soon as they can, and what can do them very little service while they may chance to remember it—as that Iceland is 'situated between the 63d and 67th degrees of north latitude, and the 12th and 25th degrees of west longitude; is 280 miles in length, and 180 in width; and that its population, according to the last census, is 53,000; '—and so forth; instead of this, let the scenes, the occupations, the habiliments, of an Iceland family, during their few summer days, and then during their long wintry months, be graphically described (and with an admixture of humor) and aided by the best pictorial representations that may be at hand. Descriptions of this sort, illuminated by the pencil, and vivified, when the means of doing so are available, by poetic extracts, will never be obliterated from the memory; and if this same method be carried forward, round the globe, the result, especially with children of vivacious minds, will be a general invigoration and enrichment of the faculties, apparent ever after in almost every sentence that is written or uttered."

FOR PARENTS. Pour water hastily into a vessel of a narrow neck, little enters; pour gradually, and by small quantities the vessel is filled. Such is the simile employed by Quintilian, to show the folly of teaching children too much at a time.

EDUCATION IN SCOTLAND. A close observer tells us that on stepping unexpectedly into a country school on the roadside in Scotland, he caught "a class of poor bare-footed boys going honorably through a close examination in Agricultural Chemistry."

Number of Districts and Scholars.

There are in the State fourteen counties, embracing two hundred and forty organized towns. From Addison County no returns have been received, and statistics relative to the number of districts and the number of children in them of school age have been received from only two towns in Chittenden County. Returns are also wanting from a few towns in other Counties. In the territory which the returns embrace, there are, as will appear from "Table A," which accompanies this report, 2,276 school districts, embracing 79,757 children between the ages of four and eighteen years. In some few cases, however, the number of children of school age is not embraced, so that the number really exceeds what is here stated, and probably varies but little from 84,000. Taking the population of the towns from which no information has been obtained, as the basis for estimating the number of districts in those towns, the whole number of districts in the State somewhat exceeds 2,750; and the whole number of children in the State, of school age, is some upwards of 100,000; the proportion to which this class bears to the whole population being found to be from thirty-three to thirty-four per cent.

Assuming these calculations to be correct—and it is believed that they vary but little from the truth—the average number of scholars in each district is 37, for the State; ranging from 30 in Orange County, to 54 in Grand Isle County. The average population to each district is 110; and the average extent of territory about three and one-fourth square miles—estimating the area of the State at 9,056 square miles, which is believed to be nearly correct, although usually stated in books at upwards of 10,200.

On comparing the districts in this State with those of New York and Massachusetts, in regard to territorial extent, general population, and the number of children of school age which they contain, we are struck with the disproportion which exists between them. In New York the average area of their districts is upwards of four square miles, and the average number of scholars 62. But as only those between the ages of five and sixteen years are there numbered as scholars, in order to make the cases parallel three-elevenths should be added. This would give 79, and a general population of 236, as the average to each district. In Massachusetts—the most densely populated State in the Union—the districts yet embrace, on an average, a territory of two and a half square miles, 56 scholars, (or adding in this case two-twelfths to equalize as before, 65 scholars,) and a general population, of about 225. • • • • •

To increase the extent of the districts in this State so as to embrace the same population and number of scholars as do those of New York it would be necessary to reduce our number of districts one-half. This however, in consequence of the sparseness of our population, would occasion too great inconvenience to be desirable. But it would surely seem that they might be made to embrace the same extent of territory as do those of New York; and to effect this a reduction of twenty per cent. on our present number, would be requisite. This would give us, on an average, about

46 scholars to a district, and a population of 138—adding a very considerable amount to the strength of the districts, and their ability to support competent schools. Small districts are said—and truly so—to be the paradise of ignorant teachers. But this class of beings is not so valuable and useful to the world, that we need feel any compunction in breaking up their haunts, and desolating "their pleasant places."

It might, however, be impracticable to effect any considerable reduction of the existing number of districts; but it is deemed vastly important that the public attention be turned to the evil, and a very valuable end would be gained, if the public mind could be forcibly impressed with the fact that efficiency and usefulness of our schools urgently require, at least that limits be set to the prevailing mischievous tendency to multiply school districts.—*1st Annual Report of State Superintendent.*

REMARK. The evil of small districts may be partly remedied by means of *union schools*. Two or more districts may unite to support a central school for the larger scholars, for a greater or less part of the year as they may be able; while the smaller scholars are *uniformly* under the care of female teachers. This would save something of the expense of winter schools in the several districts, to be applied to the support of the central school; while at the same time it would secure peculiar advantages to both classes of scholars. For smaller children, females are the best teachers and managers. The large scholars, being in a school by themselves, could receive more attention, and in fact enjoy the advantages of an Academy.

For the School Journal.

MR. EDITOR:—There is a queer sum in Adams's Arithmetic at the bottom of page 228, example 12.—This is it: "A man agrees to serve a farmer 40 years without any other reward than 1 kernel of corn for the first year, 10 for the second, and so on, in 10 fold ratio, till the end of the time; what will be the amount of his wages, allowing 1000 kernels to the pint, and supposing he sells his corn at 50 cents per bushel?"
 Answer: \$ 8,680555,555555,555555,555555,555555,
 555555, ⁵⁵⁵/₁₀₀₀

It is, by the English numeration, a little more than 84 sextillions. I wish somebody would tell where all that money might be put, if the silver dollars should all be melted up into one solid junk. I suppose it might be put somewhere, because there is all out-doors to put things in. But I wish to know how many solid feet it would take. I tried to do it in this way. A silver dollar weighs 418 grains. A solid foot of water weighs 437489,4 grains. Silver being 10,51 times as heavy, a solid foot of silver weighs 4598013,594 grains. This divided by 418 gives just \$ 11000, the worth of a solid foot of silver. A solid mile contains 147197-952000 feet. This multiplied by \$ 11000 gives \$1619-177472 000000,—value of a solid mile of silver. The earth contains 260000 000000 solid miles. If the earth was silver, it would be equal to \$ 430 986142-790000 000000. The sun is as large as 1404928 earths, as you may see in the Arithmetic, Cube Root,

Supplement, Ex. 10, and would be equal to \$505-512499 519324 160000 000000. If that long number up there, \$8,850555, &c., is divided by this last number, \$505 512, &c., the quotient will be something over 17000 000000:—that is, the man's wages, in solid silver, would require seventeen thousand million suns to put it in. This is so great I conclude there must be a great error somewhere, and I wish somebody would tell where it is and what is the truth.

Boy.

Question.

MESSES. EDITORS:—In your first number I noticed a story about buying apples. I propose for your younger readers a question about raising carrots. I have 1000 young carrots growing so near together that, if I let them all stand, they will average one inch in diameter at the top. If I pull up two-thirds of them, so as to give room to the remaining third, they will average 2 inches. Now supposing the carrots to average 1 foot in length, and the taper to be regular, should I gain or lose, in solid food for my cow, by thinning out as described, and how much?

Q.

Noble Spirit among the Little Girls.

The New York correspondent of the Boston Recorder relates the following thrilling incident which occurred in a Mission Sabbath School of German children in that city:

“It had been the custom for some time, to offer a hymn book, testament, or other premium to the scholar who should recite the greatest number of texts in proof of some doctrine of scripture. The rewards of course were won by the girls, as they are always the best scholars. Among these was one who, having a better education and greater advantages than the rest, had, for several months in succession, taken the prize. At last a very active rivalry was excited, and one of the more ambitious children actually learned 44 proof texts, being all her teacher found for her, and to make sure of success, committed to memory 20 verses besides, making 64 in all. But Sophia had learned 59 proofs, and was therefore entitled to the reward, a finely bound New Testament. The exercises of the day were closed, and the school waiting for the award of the promised prize. Sophia has learned 59 proofs, said the superintendent, and Caroline has committed 64; they both deserve the gift, but Caroline has learned the most, and it is hers.

“The prize for which the poor girl had hoped and labored a whole month was given to her, but she knew it was not rightfully hers, and though the temptation was strong, very strong for a child, she did not yield. Trembling and faltering she told the superintendent that she had learned but 44 proofs! although she had recited 64 verses, and sat down pale and disappointed, but with an approving conscience. The book was then given to Sophia, who, instead of receiving it, requested that it should be given to Caroline, who had labored so hard to win it. The teachers had looked on in surprise and admiration at first,

but when they saw two such noble spirits, their tears were not to be restrained. The world has heard and admired the story of Washington's honesty when a child, but I am sure his frank confession was not more noble than the honesty of one of these poor German girls, and the generosity of the other.”

COLERIDGE'S ADVICE TO A SCHOOL-TEACHER.

O'er wayward childhood wouldst thou hold firm rule,
And sun thee in the light of happy faces,
Love, Hope, and PATIENCE—these must be thy Graces,

And in thine own heart let them first keep school!
O part them never! Haply there will come
A weary day, when overtasked at length,
Both Love and Hope beneath the load give way;
Then with a statue's smile, a statue's strength,
Stands the meek sister Patience, nothing loth,
And both supporting, does the work of both.

Respect the Children.

The greatest reverence is due to boys—*maxima pueris debetur reverentia*, said a great educator of antiquity. And there is nothing more important, as a primary rule in the management of a school, than that the Teacher should keep in lively remembrance what the children are, as budding men and women, and as immortal and accountable to God. Read the following paragraphs from a Lecture delivered before a Teachers' Institute in New York, by Rev. Reuben Tinker:

This country as it shall be thirty years hence lies in the children who scarcely know their right hand from their left. In those commencing the A. B. C. of their alphabet and of every thing else the future United States are wrapped up as the forest in the acorn, or the future fields of grain in the kernel of wheat.—Hence children are objects of great interest, and every group of them, whether in the family or school room are entitled to respect as the heirs to a high destiny. And if the Teachers before me would feel their souls stirring in them, were they to have for their pupils the young princes hereafter to sit on the throne, their hearts ought to beat now out loud at the prospect of having in their care those who—not of royal blood but incited by themselves to noble deeds—shall hereafter be found in the highest place of honor and trust. For who, pray tell me, rather than they under your care the next few months shall aspire to usefulness and renown.

Hence the first duty I would enjoin on you is *respect for your scholars*. For wherever your school is situated, there may be among that living assembly such men as Grey in his elegy supposed there were in the country church yard, of whom he sang:—

“Perhaps in this neglected spot is laid,
Some hearts once pregnant with celestial fire,
Hands that the rod of empire might have swayed,
Or waked to ecstasy the living lyre.”

So may you think of the children that shall cluster around you, however rude and unpromising may be their first, second or third appearance. There may

be among their nature's future noblemen. Some one who, like Martin Luther, shall shake kingdoms.—That remarkable man was at first a poor boy. "I was accustomed," said he, "with my companions to beg a little food to support our wants. We went through the villages singing from house to house carols on the infant Jesus born at Bethlehem." Often instead of bread he received nothing but harsh words. More than once overwhelmed with sorrow he shed many tears in secret; he could not look to the future without trembling. He was sometimes assisted and encouraged, and he proceeded on till he reached the highest eminence. And he used to say, "do not despise the boys who can earn their bread by chanting 'Panem propter Deum,' 'bread for the love of God.' I have done the same," continued he, "done the same. At one time I was only a poor mendicant.—And now by means of my pen I have succeeded so well that I would not change fortunes with the grand seigneur himself. I may say more; if I were to be offered all the possessions of the earth heaped one upon another, I would not take them in exchange for what I possess. And yet I should never have known what I do, if I had not been to school and been taught to write." Thus did this good man acknowledge that these humble beginnings were the origin of his glory. He was not afraid of reminding his readers that the voice whose accents electrified the empire and the world had not very long before begged a morsel of bread in a petty town.

Among the Teachers of the school which Luther attended was one by the name of John Trebonius, a learned man of agreeable address, who had that regard for the young which is so encouraging to them. Martin had observed that when Trebonius came into the school-room, he took off his hat and bowed to the scholars, a great condescension in those pedantic times. This pleased the young man Martin Luther. He began to perceive that he himself was something. The respect paid him by the master had raised the scholar in his own estimation. The colleagues of Trebonius, whose custom was different, having one day expressed their astonishment at his extreme condescension, he answered them, and his answer made a deep impression on young Luther. "There are," said he, "among these youth some whom God will one day raise to the rank of burgomasters, chancellors, doctors and magistrates. Though you do not now see signs of their respective dignities, it is yet proper to treat them with respect." Doubtless the scholars were stimulated by such a prospect to render themselves worthy of distinction. Certainly, Luther was, and the prophecy of the Teacher was in his case amply fulfilled.

It is due to them. They will endeavor to be something, if they find that in your opinion they are something. But if they discover that you think they are good-for-nothing boys and girls, they will perhaps verify your opinion by proving themselves worthless. Encouragement is good for them. It works better than expressions of impatience and discouragement. When I was just able to go to summer school, the Teacher used to tell me that some day I should make

a minister, and it may be owing to that as much as to almost any thing else that I am one. And besides, you will wish your scholars to respect you. Teach them to do so by example. As ye would that others should do to you, do ye even so to them. This will secure their regard for you more than a pompous attitude, or authoritative tones, or a large *ferrule*, or code of laws. And in looking at them as containing the germ of future worth, your employment will possess its proper interest to you and you will devote it to your heart, mind and strength.

Value of a Child's Time.

It is sometimes said that a child's time is not worth much; some even say, they send their children to school to get them out of the way. But parents often find that they learn some things very young. Children "learn to go astray as soon as they are born, speaking lies;" i. e. they learn to deceive, and utter falsehoods at a very early period in their childhood. And to their joy, too, they sometimes find, that when very young children have the opportunity afforded them, they lay a broad foundation for such a superstructure as makes men hold up their hands and wonder. The mother of Baron Cuvier, I remember to have heard, would have her son recite his Latin to her every morning before going to school, although she did not understand a word of it, because she had an impression that, on the whole, spring was the time to cast in the seed. His school mates and his teacher wondered how it was, that the little Baron always had so good a lesson, and France has still wondered how Cuvier came to be so great a man: the secret was, he was schooled upon his mother's lap.

Write that Thought.

Many valuable thoughts have passed through the minds of men when alone, which could not be called into service when needed, and thus been lost, for the want of some mode of retaining them more safe than an ordinary memory. To carry a pencil and little book constantly in the pocket for the record and preservation of a thought of more than ordinary value, will be found to be a valuable practice. Suppose but one such record was made in a day,—at the end of a year the individual would be able to call around him a brighter array of thoughts and suggestions relative to the affairs of life in which he was interested, than he would be able to do under any other circumstances. President Dwight recommended this practice to his students and little as he seemed to stand in need of sound thoughts on almost any subject, yet he has often been seen writing upon his little tablet on a rock or a log by the road-side, and even to stop his horse and arrest a passing thought by writing on the pommel of his saddle,—it was one of the secret springs that supplied the fountain of his giant intellect, and is a practice which has proved its utility in thousands of instances. Young man! preserve that thought—*Exchange paper*.

Dr. BENJAMIN RUSK always had with him a small memorandum book, which he filled rapidly with facts

and hints. Porz took such care never to lose a good thought, that it was his practice, when one occurred to him in the night, to strike a light and put it on paper. And it has been an approved rule with many educators and scholars, never to read without pen in hand.

But there is more in this habit than the mere saving of a thought. The mind is a tree from which the more fruit you gather, the more it will yield. And again, the attempt to express a thought in writing makes it more clear and definite to one's self, and is thus an excellent means of mental cultivation. Yet more,—the young who have neglected original composition, are often troubled and perplexed, in writing a school exercise or even a letter, to find something to say and a proper way to say it. Now let the habit of writing down the thoughts one has, and the facts one observes, be commenced early and kept up, and writing will soon be easy. Instead of flying away when you take up your pen, the thoughts will cluster around, as if waiting their turn, and the proper words will "trip in as nimble servitors," in their proper places.

The Greatest Trust.

Gen. H. A. S. DEARBORN, Mayor of Roxbury, in his inaugural Address, speaks of the public schools in the following just terms:—

"Among all the various trusts which have been confided to the municipal government, that of providing for the establishment, support, and supervision of the public schools is decidedly of the most immediate consequence. So liberal, thus far, has been the appropriation for these purposes, and so ably have the School Committee performed their duties in its expenditure, and in the organization and management of all the schools, that they can be favorably compared with those of the highest reputation, in any other part of our country; while the members of that committee are deservedly entitled to the grateful acknowledgments of the government and the people, for their gratuitous, yet very responsible and laborious services.

"It is not merely the literary and scientific instruction, which is obtained in these juvenile seminaries, that render them so necessary and valuable; but the moral principles which are there inculcated, the rectitude of conduct which is superinduced, and the elevation of character which is attained, that places them at the head of all the other institutions which have been devised by man, for the early development and lasting establishment of those exalted qualities of the mind and heart, on which individual happiness and prosperity, the stability of governments and the glory of nations depend."

"Paley said, that "to send an uneducated child into the world, is little better than to turn wild beasts into the streets;" and one of our most eminent philosophers and philanthropists has declared that "mothers and school-masters planted the seeds of nearly all the good which exists in the world, and therefore, its reformation must be begun under the parental roof and in the school-house." Whenever and wherever proper attention is paid to the mind, heart, conduct and

manners of children, by fathers, mothers, and school instructors, their future lives become admirable illustrations of the glorious influence of such early inculcations of virtue and piety."

AGRICULTURE IN SCHOOLS. Some time since Prof. Johnson of Edinburgh (eminent for his knowledge of Agricultural Chemistry) travelled several months in different parts of Scotland for the purpose, partly, of delivering a series of Lectures to various assemblies of farmers. The result was an application from teachers of parochial schools (the common schools of Scotland) for a short course of lectures on the best mode of teaching the elements of Agricultural Chemistry to the older boys in their schools. The request was complied with; and more than 400 teachers attended the lectures, which excited among them the deepest interest.

LOOK FOR THE GOLD AND GEMS. Find out the golden side of each child's character, and govern as much as possible through that. Study the excellent points in each child's mind, and seek through them to awake and discipline the whole.

THE FACE. We, that is, I and he, find upon a human face, when it is old, the notched counting-stick of severe sorrows which have so rudely passed over it; and when it is young, it appears to us like a blooming flower-bed on the slope of a volcano, whose next eruption will overwhelm it with destruction.—Ah! either the future or the past is written in every face, and makes us, if not melancholy, at least mild and gentle.—*Richter's "Thorn Pieces."*

ENERGY. A man with knowledge, but without energy, is a house furnished, but not inhabited; a man with energy, but no knowledge, a house dwelt in, but unfurnished.—*Crystals from a Cavern.*

THE STUDY OF AGRICULTURAL CHEMISTRY has been introduced lately into some of our New England Academies. In that way it may the sooner reach our common schools.

Answer to the Enigma in our first number—LATIN DICTIONARY.

NOTICE.

It is proposed to hold a Common School Convention at Londonderry (North Village) on Tuesday and Wednesday, the 29th and 30th of June next, commencing at 9 o'clock, A. M. School Teachers, District Committees, Town Superintendents, and the friends of education generally, in Londonderry and the adjoining and neighboring towns, are invited to be present. Lectures on various subjects will be delivered. The expediency of corporal punishment in school, of offering premiums to those pupils that excel others, and of the practice of teachers "boarding around," will be discussed. The subject of teachers' wages will also be brought before the Convention for consideration. It is hoped that District Committees will not fail to see that their Teachers have an opportunity to attend this Convention, as the services are expected to be of special service to them.

ADDISON BROWN, Sup't of Common Schools for Windham County.

Brattleboro', May 27th, 1847.

Distances of the Planets.

Map 1 shows all the planets at their relative distances from the sun. The scale is one hundred millions of miles to an inch. The distances of the planets in miles are as follows:

Mercury,	37 millions.
Venus,	69 "
Earth,	95 "
Mars,	145 "
Vesta,	225 "
Juno,	254 "
Ceres,	263 "
Pallas,	263 "
Astræa,	253 "
Jupiter,	495 "
Saturn,	900 "
Herschel,	1800 "

It is almost impossible to conceive of these vast distances. They may perhaps be better understood by considering the time it would require for even a rapid body to visit them from the sun.

Were a body to move at the rate of five hundred miles an hour, without intermission, it would require near eight and a half years for it to pass from the sun to the nearest of these planets. To visit the earth would require over twenty-one years; and to reach Herschel over four hundred years!

Railroad cars travel at a rate of thirty miles an hour, or a mile every two minutes. Now if there was a railroad from the sun to the orbit of Herschel, and the orbits of the other planets were stopping places on the route, the train would reach—

Mercury,	in 152 years.
Venus,	" 264 "
Earth,	" 361 "
Mars,	" 554 "
Jupiter,	" 1884 "
Saturn,	" 3493 "
Herschel,	" 6933 "

Such a journey would be equal to riding four hundred and fifty thousand times over Whitney's railroad from Boston to Oregon.

It is now about 5850 years since the creation of the world. Had a train of cars started from the sun at that time to visit the orbit of Herschel, and traveled day and night ever since, at the rate of thirty miles per hour, they would still have 284 millions of miles to travel before they would reach their journey's end. To finish the passage would require 1083 years longer; the whole of time past and a thousand years to come!

Such is the vast area embraced within the orbits of the planets, and the spaces over which the sunlight travels to warm and enlighten its attendant worlds."—*Elementary Astronomy.*

HISTORICAL ENIGMA, COMPOSED OF 26 LETTERS. My 14th, 9th, 13th, 18th, 15th, and 4th, a warrior, supposed to be the first king. My 13th, 5th, 14th, 5th, and 19th, a civilizer of the East. My 8th, 15th, 13th, 5th, and 18th, the greatest of the Greek poets. My 3d, 5th, 3d, 18th, 15th, 16th and 19th, founder of Athens. My 4th, 9th, 4th and 15th, daughter of the

king of Tyre. My 19th, 15th, 12th, 15th and 14th, one of the wise men of Greece. My 12th, 25th, 3d, 21st, 18th, 7th, 21st and 19th, a reformer of the Spartan republic. My 26th, 5th, 14th and 15th, a philosopher of the Stoic school. My 24th, 5th, 14th, 15th, 16th, 8th, 15th and 14th, a celebrated historian and philosopher. My 1st, 18th, 3d, 8th, 9th, 13th, 5th, 4th, 5th and 19th, a distinguished geometrician of Syracuse. My 14th, 21st, 13th, 9th, 20th, 15th and 18th, grandfather of the founder of Rome. My 6th, 18th, 15th, 9th, 19th 19th, 1st, 18th and 20th, an entertaining French chronicler. My 2d, 1st, 3d, 15th and 14th, an English philosopher and universal genius. My 11th, 5th, 16th, 12th, 5th and 18th, a German astronomer. My 17th 21st, 9th, 18th, 9th, 14th, 21st and 19th, a name given to Romulus by the Romans. My 23d, 15th, 12th, 20th, 1st, 9th, 18th and 5th, a French writer of great celebrity. My 14th, 5th, 23d, 20th, 15th and 14th, a profound mathematician and philosopher. My 1st, 12th, 6th, 18th, 5th and 4th, founder of the University of Oxford. My 10th, 21st, 2d, 1st, and 12th, the first musician in ancient history. The whole comprises a word of three syllables, used in every written language.

THE HEART. In a single hour the heart beats 3,600 times, discharges 7,200 ounces of blood, which passes through the body 25 times. In 24 hours the blood in the body circulates through the heart 600 times.

THE HOE AND THE SLATE. As I was riding in the stage, looking to see what could be seen, as all passengers do, my eye was attracted by a lad bearing on his shoulder a bright new hoe with a neat handle attached to it, and on his hoe-handle there was suspended a slate. "Noble representative of a northern laborer!" I exclaimed. "March on, brave boy! march on! Keep thy grasp on both the hoe and slate, and thy country will be grateful for the day that gave thee birth. Let manual labor and intellectual effort go hand in hand, and, heeding the God of our fathers, we are safe."—*N. Y. Evangelist.*

CHOICE OF BOOKS. The books we read ought to be chosen with great care. An ancient king of Egypt had written over his library, "The medicines of the soul." How many books are poison to the soul!

When you see a person continually barking at, and abusing those possessed of influence, you may know that, like a dog at the foot of the tree, he barks because he can't climb.

Lavater says, 'He who sedulously attends, pointedly asks, calmly speaks, coolly answers, and ceases when he has no more to say, is in possession of some of the best requisites of man.'

M. de Morrolles said of a censorious neighbor: "His mouth costs him nothing, for he always opens it at the expense of others. I wish that some day he would bite his tongue, for then he would poison himself."

THE AGRICULTURIST.

Agricultural Interests of Vermont.

In a country so extensive as our own the occupation of its inhabitants must necessarily be various, and those pursuing even the same occupation, are often placed in circumstances so varied, as to render it necessary to pursue entirely a different course to obtain the same object. This is especially the case with respect to the occupation of the farmer. In Louisiana farming means the cultivation of the sugarcane; in Georgia and South Carolina, the production of rice and cotton; in Virginia and Maryland, the raising of tobacco; in Kentucky, of hemp and corn, and in the States north of the Ohio river, the production of wheat and other grains. Now it is plain that a good farmer in Louisiana might find all his knowledge and skill of no use if he should move into New York; and the farmer in Ohio, who could raise his forty bushels of wheat to an acre, would cut a poor figure in attempting to raise rice and cotton in Georgia, and the very negroes would laugh at him for his ignorance of farming. The varieties of soil and climate, of the market and the price of labor, require the cultivation of different crops, and the use of different means for the production of the same crops. In Pennsylvania, for example, lime is used with great advantage on wheat land, while on the limestone hills of Vermont it apparently has little effect. In New York plaster is used extensively, while in Vermont we must find some substitute on account of the expense of freight. In Massachusetts the Brown Corn and other large varieties may be raised to advantage, while here our short seasons require that we should use the smaller Canada corn,—at least in the northern parts of the State. In Connecticut much of the work on the farm, such as ploughing, manuring, &c., may be done while Vermont is still shrouded in her robe of snow; and the question arises whether we should attend to such work in the Spring or Fall.

These considerations show the importance of an Agricultural paper, devoted particularly to Vermont Agriculture. We have some very valuable agricultural papers published in our country, full of useful information; but these are designed for the whole country, and it could not be expected that the peculiar interests of the State of Vermont would occupy any large portion of such papers. It would be well if some one of them were taken and read by every farmer in the State, and a dollar thus spent would be as valuable as the product of an acre of good land.—But if such a paper would be thus valuable, one published in our own State and devoted entirely or principally to our interests, would be doubly valuable to us, and any farmer cultivating twenty acres of land, could better afford to lose the product of his best acre than live without the paper. Some farmers do take valuable agricultural papers from other States, and for the most part, they would think they could not afford to do without one published in the State, even though it should cost four times twenty-five cents.

There are some farmers in this State who obtain twice as much profits from their farms as others; and the secret of their success is their superior knowledge—such knowledge as is communicated from month to month in agricultural papers. Should every farmer in the State take such a paper and read it constantly, in ten years the agricultural wealth of the State would be doubled. If every farmer should take such a paper and read it, and encourage his children to read it, he would do better for them than if he should give them each a farm. There are those who feel a commendable interest in the cause of agricultural improvement; and if they will lend their influence, *personal, direct and efficient*, in securing the circulation of such a paper, and also in communicating through its columns the results of their own experience, they will accomplish much towards securing an object so very desirable. A united effort for this object will result in placing Vermont where she should be, in the front rank of the agricultural States of the Union.

AGRICOLA.

Wool Depots.

MESSES. EDITORS,—I perceive by a short article copied from your paper, that wool-growers are beginning to direct their attention to the importance of establishing Wool Depots for the sale of their wool.

That the present system of buying and selling wool is very unfavorable to the interests of the Farmer, is a fact much better understood by buyers and manufacturers, than by the wool grower, for the reason that the latter has not usually the means of ascertaining the true value of his wool, and of course must trust quite too much to the reports of the purchaser for this information. Let us look at the natural tendencies of the present system.

Experience teaches manufacturers and wool buyers, that by united plans and efforts, the price of wool can be in most cases brought under their control. It would be natural therefore, that previous to the season of buying, there should be a general understanding among them as to the prices to be offered for the coming clip, and that this combined decision should be extensively circulated among the farmers to prepare them for those prices. Then would come the buyers, whose interest it is to buy as cheap as they can. To meet with good success, they would find it essential to convince the producer that the prices proposed are all the wool is worth, if not more; in doing which, all means would be used that are consistent with a liberal conscience. They may compare the present prospects with the past and future—talk of the importation of foreign wool and cloths—flooded state of the market—scarcity of money, &c., coming to the general conclusion that now is the time to sell, as the market price will be no higher, and in all probability must fall; in confirmation of which they can quote each other as authority. If wool has been bought at a low price, they would be naturally inclined to make it as public as possible, and at the same time, to extol the condition and quality of the lot sold. Should these or similar schemes fail, they might leave you after giving some friendly advice, and very hon-

estly remark that they have offered all they can afford to pay, and do not believe any one will make a better proposal; if you should have a better, or a certain price offered, you are advised as a friend to sell.—Should they not see fit to give you another call, the case can be stated to a brother buyer, who may try his skill, and perhaps make a small advance in the price. As a natural result of the use of these and many other means that might be named, might it not be expected that the principal part of the wool could be purchased at a reduced price! Should there happen to be a lot that could not be bought at a bargain, it might be reported to distant purchasers as sold, or as "coarse, dirty stuff."

I do not say that all wool-buyers manage in this way; doubtless there are among them those who honorably resist the temptation. But I ask, does not our present way of selling wool invite a kind of management substantially such as I have described! And ought we not to guard against it? Wool Depots, under the superintendence of men of the requisite qualifications, would, in my opinion, remove these evils.—Could they be established by competent and responsible persons who will act conscientiously in representing the wool-growers' interest, I believe they would be the most efficient means for securing equitable sales, and would prove a source of convenience and economy both to the grower and manufacturer.

Have we not men worthy the confidence of the Farmer and Manufacturer, who are willing to engage in this enterprise on reasonable terms, and thereby save a large annual tax paid to this third intermediate class—the agents and speculators? We should remember that, provided our wool costs the manufacturer its value, nearly all of the expenses and profits of buying and selling until it falls into his hands, is taken from the pocket of the producer. And let us not forget when purchasers pay us their annual visit, that the prices at which we sold our wool the past season, have secured to many of the manufacturing establishments from 10 to 16 per cent. interest, exclusive of the reserve fund; and that too after deducting the commissions and profits of agents and speculators.

How think you, wool-growers, such profits would compare with that of raising wool!

EVEN' R BRIDGE.

Pomfret, Vt., May, 1847.

Wool Depots.

Extract of a letter from J. B. NOTT, Esq., Secretary of the N. Y. Agricultural Society, to the President of said Society.

One factory that I can name, values a certain description of wool only at 35 cents per lb., because it is unsuited to their style of goods; while the very same wool is valued in another factory at 40 cents per lb., for the opposite reason.

Here is the evidence, in one case at least, that in this country, as in England, the manufacturer undervalues the wool brought to his factory for sale.

Again, the Mouselin de Laine manufacturers in some instances used wool of precisely the market value with the satinnet maker. But the style of the

wool is different; the staple of the one being longer than the other.

The interest of both would be promoted by sorting wool, not only as to its quality and the condition of the fleece, but also as to style, and undoubtedly both would be willing to pay a trifle more per pound—a trifle it is true—but success often depends upon trifles.

The staplers of satinnet factories and other manufacturers of coarse fabrics, frequently collect large stocks of wool of a quality used only by the manufacturers of broadcloth. Yet for this superior wool no more has been paid by the satinnet maker than for that of inferior quality, which is perfectly well adapted to his purpose. I have before me the evidence of one case, where an advance of 20 cents per lb. was obtained by a manufacturer of satinets, for a quality too good for his purpose. So also the makers of mouselin de laines, purchase large quantities of wool in order to select from it only that which has sufficient length of staple to suit the purpose; the residue is disposed of to others. A company can be named who annually use 200,000 lbs. of mouselin de laine wool, and yet buy 350,000 lbs. to select from.

Those manufacturers who require the best and the finest wool for their goods, are compelled, under the existing practice, to buy large quantities of wool unsuited to their purpose. An establishment can be named that has 150,000 lbs of wool now on hand, thus obtained, and which they will gladly return to the farmer at cost. The Middlesex Company use annually 1,000,000 lbs. of wool; what then must be the amount of surplus wool purchased by them!

A Vermont manufacturer of broadcloths purchased a lot of wool in Dutchess county; among it was some wool brought from his own immediate neighbors, and which he could have purchased before he left home if it had suited his style of goods, without paying a price for it enhanced by the profits of two factors, through whose hands it had passed, and the expense of the journey to Dutchess county and back. The manufacturer must be paid for this useless employment of his capital. He is paid, even though unwittingly; he is paid by the flock-master.

I have collected numerous facts to sustain the position I have taken, but one has recently come under my notice so conclusive that I select it in preference to others for this purpose. A lot of wool, amounting to several thousand pounds, was put up in the manner complained of, in 1844, but was not sold till 1845, and was then sold without being sorted. The clip of the same flock for 1845 was put up as it ought to be, and was also sold—but sorted; a few hundred pounds of the coarser fleeces, amounting to 1-10 of the quantity put up in 1844, being separated. Both lots were cleansed by the same manufacturer, in all respects under the same circumstances except as I have mentioned, and yet the last lot brought 10 cents per lb. more than the former. Both lots were stapled and cleansed, and the real value of each determined by the manufacturer under circumstances which leave no doubt that the truth was fully and fairly ascertained and stated.

Those who take short sighted views of things, may

not see clearly the injurious consequences of the evil here pointed out. They may say that under the present system, quite as much if not more wool is purchased under any other system; and if one class of manufacturers accumulate large stocks of wool that they do not want, they can sell them to others who do. All this is undeniable. But the manufacturers no more desire to be merchants than they desire to be wool-growers, and thus acquire themselves the united profits of the farmer, the merchant and the manufacturer.

The history of Commerce shows that with few exceptions this jumble of different pursuits is fatal to prosperity. If the manufacturer, by the force of circumstances, is nevertheless compelled to some extent to pursue this course, he will not transfer an accumulation of, to him, useless wool, to a brother manufacturer, without a profit, and whatever that profit may be, it is so much abstracted from the profit of the wool-grower.

Again: Whatever retards the prosperity of the woolen factories, abates measurably the profits of the flock-master, and among the various hindrances to the growth and extension of this description of manufacturers, none has been more potent in its baneful influence than the known and acknowledged fact that an enormous amount of capital is requisite to ensure success. I hope to be able to show, by and by, that it is for the interest of the wool-grower to do all in his power to lessen this evil, and bring the cotton and the woolen manufacturer more nearly to a level.

The 150,000 pounds of wool referred to has cost that Company not less than \$52,500, a very nice sum to lay perfectly idle for more than a year. The bare mention of the fact will convince any one that this Company would readily pay more than it now does for the description of wool it actually wants, if an outlay so enormous and at the same so unnecessary can be saved.

Preparing Wool for Market.

Mr. Morrell, in the "*American Shepherd*," gives particular directions in regard to preparing wool for market. He recommends that the fleeces, as fast as they are taken from the sheep, should be spread on a table, the outside uppermost. The fleece is then carefully spread out, the ragged portions from the neck, head, and skirts separated, and the fleece then made as compact as possible, by pushing the sides towards the centre. "The loose wool is then thrown upon the fleece, which is followed by turning over the sides and ends so as to form an oblong stripe, say about two to three feet long, and one and a half wide, which is moved to the front edge of the table. He then commences to roll the long stripe, aided by a boy at the other end of it, who lay their arms flat from the elbow to press the wool as the rolling proceeds, till the stripe is reduced to six or nine inches in width, depending on the size of the fleece. The boy then mounts upon the table, and each commences rolling from the ends of the stripe till the parts meet, when the boy rolls his portion on the top of assistant's, firmly pressing it till the twine is passed round both

ways and tied, which effectually secures the fleece, no matter how roughly handled. After it receives a slight pressure it presents somewhat the form of a cheese." He earnestly enjoins that the fleeces should be thoroughly cleansed, and nothing put within them but "*clean things*."

To Wool-Growers.

Numerous liberal minded persons interested in the Wool business, having placed funds at our disposal for the purpose herein after mentioned, we shall, on the 1st day of October next, award and pay the following premiums, viz: Ten Gold Medals worth ten dollars each for the ten entire clips of most valuable fleeces for clothing purposes—ten Gold Medals worth ten dollars each for the ten entire clips of the most valuable fleeces for combing or worsted purposes—ten premiums of ten dollars each for the ten best conditioned entire clips of Saxony Wool—ten premiums of same amount for the ten best conditioned entire clips of Merino Wool—ten premiums of same amount for the ten best conditioned entire clips of Merino grade Wool—ten premiums of same amount for the ten best conditioned entire clips for combing fleeces. All Wool-Growers throughout the United States are invited to compete for them. We would again invite the attention of Wool-Growers to our remarks on the subject of preparing wool for market as published in the reports of the Wool-Growers' meeting at Steubenville, Ohio, the 10th of February, 1847, also in the Ohio Cultivator, and other papers of the country.

All bales of wool designed for our care, should have the name of the owner or grower plainly written or printed on them in full, together with our address, as follows: "Perkins & Brown, Springfield, Mass."

All lots of wool intended to compete for the premiums, should reach us by the first of August next. Growers may receive premiums if their wool be put up and marked separately, even though the wool come through the merchant or other wool dealer. Any further contributions from Wool-Growers or other public spirited persons will be expended in preparing the medals, publishing a report, and in additional premiums.

All Editors of Periodicals friendly to agricultural pursuits throughout the United States, are respectfully requested to publish.

PERKINS & BROWN.

Springfield, Mass., April 20, 1847.

MARU. To the Editors:—There is in this vicinity a large quantity of what Dr. Thayer tells me is blue marl; and he advises me to try it as a manure. Can you or any of your correspondents inform me what is the best method of using it, and on what soil,—clay or sand, wet or dry!

S. E.

We have not time to answer now; and beg leave to refer the question to the State Geologist.—*Eds.*

LARGE CROP OF OATS. J. C. & A. C. Powers of Pittsford, state that they raised the last season from 110 rods of ground, 95 bushels of good oats; at the rate of 137 bushels per acre.

Corn Fodder.

Last year I gave you a short account of my sowed corn crop. In the winters of '45, '6, it was my principal dependence for fodder. On the produce of two acres, I saved a horse, a yoke of oxen, three cows, and three young cattle, which else would have been nearly sacrificed, as were my neighbors' cattle. The drouth had so cut off the hay, that people offered one-half their stock to get the other half wintered, and no one would take them at that.

I was so well pleased with my experiment, that I determined to "try again." So this year I sowed the same amount of land again, at the rate of two and a half bushels of seed to the acre, broadcast. I had a fair yield, and though I do not need it as last year, yet it is preferred by all my cattle to the best of hay. They will leave hay untouched when the corn fodder is before them, quite as much as they will leave straw when that and hay are both offered them at a time.—They will eat up all the fodder clean, seeming to prefer the stalks (which are full of saccharine matter,) to the leaves. And when I feed with corn fodder, I use no grain, which I am obliged to do when I feed hay. On this account this food is admirable for calves, and young cattle. I am keeping some calves on this alone, without a particle of grain, and they are in fine order. Horses do not like it as well as hay. Cattle and sheep do much better.

On the ground of economy, it is altogether better than any other feed I have tried. It requires very little labor, except the harvesting, (which is a heavy job,) and the yield per acre, has been at least seven tons of cured fodder. It is called good grass that yields a ton and a half to the acre, and much does less. The only trouble about the corn fodder is, that it needs a great deal of curing. It is so green it will heat and spoil unless it is thoroughly dried. After trying several ways, I now bind it in small bundles as soon as cut—shock it right on the ground, and let the shocks stand six or eight weeks in this way, when it is so dry that it may be packed in a mow, and except the outside, is perfectly bright and free from must. The outside is blackened a little, but none of it is wasted.—*Ohio Cultivator.*

QUANTITY OF CORN TO THE ACRE. If Farmers would examine their corn fields, they would doubtless often find single hills, and several hills together, that would yield 100 bushels to the acre. Suppose, for instance, that the corn be planted in hills three feet one way and two the other, and each hill to yield three large ears, or an equivalent. There would be 7,200 hills to the acre. Five ears of Brown corn have been found to give a full quart shelled. At three ears to the hill, then, it would take one hill and two-thirds to make a quart; or 10 hills would yield 6 quarts.—Therefore, as 10 to 6 so is 7,200 to 4,250—the number of quarts to the acre = 136½ bushels. Mr. Brown, who introduced the Brown corn to notice, has raised 136 bushels to the acre.

But suppose that, instead of 3 feet by 2, the hills are made 3 feet apart each way. The number of hills will then be reduced to 4,840; and the product (supposing the yield per hill to be as above) will be 904

bushels; or 45½ bushels less than if planted in hills one foot nearer each other in the row.

This simple estimate shows the importance of having the corn accurately planted, so as to leave no waste ground, and of securing the proper number of vigorous plants in every hill.

ADVANTAGE OF ECONOMY IN VARIOUS MATTERS. *Corn Fodder*, by long exposure in the field, loses one-half of its nutritive qualities, and by housing or stacking in a damp state, and feeding in an improvident way, the one-half of what remains is also lost. Corn should be cut up by the ground, as far as practicable, before we have severe frosts; and it will pay ten-fold for extra care and labor, in securely housing in a dry state. A light feed of cut corn fodder, well cured, night and morning, in a clean, warm stable, with straw fed in boxes, through the day, will keep cattle through the winter in as good condition as they are in at the commencement.

Buckwheat straw, when well cured and housed, is but little inferior to hay; and the chaff is eaten by cattle or sheep with little less eagerness than oats;—the chaff of fifty bushels of oats is worth one feed of hay for four hundred sheep; and corn cobs ground with a small portion of hard grain makes good feed for cattle or sheep.

Much is lost by uncomfortable exposure of stock to cold and storms. By carefully saving and economically feeding all coarse fodder, I have no doubt one-fourth more stock may be well wintered, in any of the grain-growing districts of this State, than is at present poorly wintered, in the usual wasteful way of saving and feeding.

There is a great want of economy in *door fastenings* for out-buildings, mostly in the time it takes to open and shut them. I find none so convenient and durable as good wooden ones, and the latch heavy enough to fall easily into the catch.

There is also a great waste of time in *branding or marking sheep*, to say nothing of the trouble it gives the manufacturer to clip the tar off from one or more large letters. The proper place to brand is on the top of the rump; that the mark may be seen from any position the sheep may chance to be in, and that it may not be obliterated by their crowding together. The size of the letter need not exceed two inches in length, and should be put on without handling the sheep at all. The tar should be in a shallow vessel with a handle; the sheep should be in a close pen, (easily made with feeding boxes,) when they may be branded and counted in a very short time, without laying hands on them.—*Cultivator.*

AGRICULTURAL READING. Milton J. Ross, of Allen Co., O., says, in the *Ohio Cultivator*: "This year I had twenty bushels of wheat to the acre, from forty acres—which for this region is a remarkable crop—and I attribute the extra yield *entirely to knowledge I have obtained by reading.* When I commenced farming, twelve years ago, my wheat crop was only

six to eight bushels per acre." * * "Mr. Buel, in his life time, furnished me information, through his 'Cultivator,' in relation to making and using manures, that is worth at least, five hundred dollars. Mr. Buel also learned me how to raise one hundred bushels of potatoes from two bushels planting."

Signs of Rain.

Some people desire a weather calendar in their almanacs, fully believing, no doubt, that the weather may be foretold by the phases of the moon. As far better however than any prognostications of such kind, we copy the following, said to have been composed by Dr. Jenner, as an excuse for not accepting the invitation of a friend to make an excursion with him:—

1. The hollow winds begin to blow ;
2. The clouds look black, the grass is low ;
3. The soot falls down, the spaniels sleep,
4. And spiders from their cobwebs peep.
5. Last night the sun went pale to bed,
6. The moon in halos hid her head ;
7. The boding shepherd heaves a sigh,
8. For see, a rainbow spans the sky.
9. The walls are damp, the ditches smell,
10. Clos'd is the pink-ey'd pimpernell.
11. Hark ! how the chairs and tables crack,
12. Old Betty's joints are on the rack ;
13. Loud quack the ducks, the peacocks cry ;
14. The distant hills are looking nigh.
15. How restless are the snorting Swine,
16. The busy flies disturb the kine ;
17. Low o'er the grass the swallow wings ;
18. The cricket too, how sharp he sings ;
19. Puss on the hearth with velvet paws,
20. Sits, wiping o'er her whiskered jaws.
21. Through the clear stream the fishes rise,
22. And nimbly catch th' incautious flies ;
23. The glow-worms, numerous and bright,
24. Illum'd the dewy dell last night.
25. At dusk the squallid toad was seen,
26. Hopping and crawling o'er the green ;
27. The whirling wind the dust obeys,
28. And in the rapid eddy plays ;
29. The frog has changed his yellow vest,
30. And in a russet coat is drest.
31. Though June, the air is cold and still ;
32. The mellow blackbird's voice is shrill.
33. My dog, so altered is his taste,
34. Quits mutton bones, on grass to feast ;
35. And see yon rooks, how odd their flight,
36. They imitate the gliding kite,
37. And seem precipitate to fall—
38. As if they felt the piercing ball.
39. 'T will surely rain, I see with sorrow ;
40. Our jaunt must be put off to-morrow.

REBELLIOUS HENS. A neighbor of ours states that hog's lard is the best thing he can find to mix with the dough he gives to his hens. He says one eat of this fat, as large as a walnut, will set a hen to laying

immediately after she has been broken up from her setting ; and thus his hens lay through the whole winter. Will some more experimenters try the virtues of hog's lard.—*Boston Ploughman.*

Dr. Warren on the Horse.

The Massachusetts Legislative Agricultural Meetings closed this year with a Lecture on the Horse, by Dr. J. C. Warren. He said:—

"The food of the horse should be proportioned to his labor. If the same quantity of food was allowed to a horse which did not work, as to one which did, the consequences would soon be fatal—the blind staggers, which was apoplexy, would be produced. Four hours exercise a day was essential to the health of a horse.

Dr. Warren thought that horses should be allowed stalls that were 6 or 7 feet wide, that they might have room to move about and turn round. It was well to have a bar behind them, and to leave them unaltered. It was a mistaken notion, he said, that after hard driving, horses should be kept fasting until they were cool. A horse could eat with as much safety immediately on stopping after a hard drive as at any time. A little moist food should be given to him at once.—If he was very thirsty and yet was hot, he should be furnished with warm water.

The Dr. condemned, in the most emphatic terms, the use of the check-rein. It was a piece of cruelty to use it ; and furthermore, it greatly impaired the ability of the horse to draw a load, or travel with ease. It was particularly necessary that the horse should be able to throw his head forward in traveling up a hill."

Warts on the udder and teats of cows may be easily removed, simply by washing them in a solution of alum and water. We have known this application to result favorably, after all other prescriptions had failed.—*Maine Farmer.*

GATES. Every field on the farm should be entered by a good self-shutting and self-fastening gate. Farmers, who are too busy in summer time to make them, or get them made, should see to it now. How long does it require to take down and put up a set of *bars*? At least two minutes ; which, if repeated three times a day for a year, amounts to thirty hours, or three days of working time—which would yearly pay for a good gate. Or examine it in another point of view—three times a day, is eighteen hundred times a year ; now is there a man between Halifax and California, who would take down and replace a set of bars eighteen hundred times in succession, in payment for a farm gate? Hardly ; yet this is the price yearly paid by those who use bars that are constantly passed, and the gate is not obtained by it. Again how much better is a well hung gate, than one half hung ! or one with a good self-fastening latch, than one with a pin crowded into an auger hole? Try it by dragging a badly hung gate over the ground, eighteen hundred times in constant succession, securing it each time with a pin, and see if you do not think this labor would pay for good hinges and a latch.

From the Boston Cultivator.

Black Sea Wheat.

Messrs. Editors:—Your correspondent, Mr. Bacon, has thrown out some correct hints on the productiveness of Black Sea Wheat. Those farmers who have an acre or more of common tillage land, or any rich soil, will do well to try this kind of grain. The berry is very hard, bran thin; it requires close grinding to make good flour. A pint of water sprinkled on to a bushel of this wheat, and lying over night before grinding, will improve the flour.

Bread made after the following directions will be white, and more moist, and sweeter than from the western flour. The yeast is made by adding about two spoonfulls of milk with a pint of water, strained into flour as thick as pancakes, add half of a salt spoon full of salt. Keep warm till it ferments. Sponge the flour for bread after it rises. Knead thoroughly, this is very important in the manufacture of good bread. For biscuit and pie crust, this flour is not so good, it requires more shortening.

Not unfrequently this wheat weighs 65 pounds to the bushel. I once weighed ten bushels carefully measured, that weighed over sixty-eight pounds to the bushel.

This wheat not only does well on rather weak soil, but it fills well on the very richest of land, even where it lodges; which is a quality that I have never known in other varieties of wheat.

Last season the wheat fly injured our grain more than for some years, the Black Sea produced about twenty bushels to the acre. The year previous the return was equal to twenty-five bushels on an average.

Some farmers here harvested over fifty bushels to the acre. To avoid the fly, it should be sowed very early or quite late. The flour is very much improved from wheat cut early. Many fail in letting it stand too late. The berry is strongly attached to the head, and does not shell in gathering, and is very hard to beat out with a flail; in consequence of which thrashing machines are very plenty with us. It is not as liable to grow standing out in the field as other wheat, in consequence of the berry being more flinty. I have converted this spring or summer grain into winter wheat. I now have the third crop on the ground, and it succeeds equal to my expectations.

Black Sea wheat, sold in October at 87½ cents freely. It has since advanced to \$1.12½ per bushel. It is the principal wheat crop in this section of Vermont, and has exceeded the consumption for the two last years. S. W. JEWETT.

Weybridge, March 29, 1847.

TO DESTROY THE CURCULIO. A gentleman of this city informs us, that a lady of his acquaintance has, for several years past, practised hanging one or more bottles, filled with sweetened water, or the like, among the branches of her plum trees, and the result has been an abundant supply of both curculios and plums. The curculios are caught in the bottle, and the plums left to ripen without suffering from the curculios' usual depredations. Some little attention is

necessary to note when the bottles are filled, and then of course they must be emptied, and filled afresh. The gentleman says that this course has been fully successful; resulting in abundant crops from trees so managed, while others around had their fruit entirely destroyed. The remedy as stated is a simple one, and so easily adopted that if in other cases it should not succeed, its expense will be very trifling.—*Cleveland Herald.*

Another method, just as strongly recommended, is this: Take a pail or tub painted white inside, put two inches of water in it, and in the evening set it under the tree—say on the top of a barrel—with a lighted candle standing in it.

We have tried both, without killing a single curculio. EDS. VT. AGRICULTURIST.

PREMIUM LISTS. The Premium List of the Addison County Agricultural Society for this year amounts to \$463.50. That of the Lamoille Co. Society is \$200. Windsor Co. near \$800. Chittenden Co. \$618. The Caledonia Society gives a copy of the Cultivator to every member who pays \$1. The Chittenden Society distributes 100 copies of the same paper among its members. The Lamoille Society offers premiums for agricultural essays.

MIDDLING COW AND A GOOD COW. A middling cow will yield five pounds of butter per week,—while a good cow will yield ten. Now offer both of these for sale—the middling animal being a large and handsome one. How many purchasers, think you, will give fifty dollars for the one rather than twenty-five for the other?

Let us make a reasonable estimate. It costs thirty dollars a year to keep a cow, and the produce of a middling one is worth six dollars over and above the keeping. But your good cow earns you seven times six! She yields twice as much milk and butter, yet the cost of her keeping is the same as the other. Her earnings are seventy-two dollars, and if you deduct her keeping, (30 dollars) you have forty-two dollars for her annual profit—seven times as much as your middling cow.—*Ploughman.*

EARTHING UP POTATOES. On this subject, Mr. C. W. Johnson, says:

"I have long had doubts relative to earthing up potatoes being a beneficial practice, and now I am convinced that it is detrimental. The variety employed in my experiments was the Jank Kidney; all the sets were planted at the same time, (the first week in April,) in rows two feet apart, and eighteen inches in the rows; and were taken up September 20th, and weighed. The average of all my experiments gives exactly an increase of one-fourth in not earthing up; but some of the plants gave still more, viz: as 49 lbs. is to 31½ lbs. The experiment has been on the sixteenth of an acre of good deep loam, with a cool, moist sub-soil."

Produce of the United States. The whole amount of the annual products of the United States is about

One Thousand Millions of Dollars. Of this the proportion to each inhabitant is greatest in New England, viz: \$84,—in the Middle States \$76, in the Southern \$52,—in the South Western \$61,—in the North Western \$41. These great differences result in part from variations in the density of the population, fertility, capital, markets, slavery, &c., and in part also from differences in State legislation.—*Journal of Commerce.*

PRESERVING TIMBER. S. W. Jewett, of Vermont, impregnated, in 1833, a stick of basswood timber, (which decays more rapidly than nearly all other kinds of wood,) with a solution of blue vitriol; it was partly buried in the ground, and exposed to constant alternations of moisture and dryness. In eleven years it was, to all appearance, as sound as when first impregnated. The remaining portion of the tree unimpregnated, had decayed years before.

PLANT TREES. Gerard, a quaint, but earnest writer, who flourished long since, gave his fellow men the following good advice. It is as good and applicable now as then:

"Forward," says he, "in the name of God, graft, set, plant, and nourish up trees in every corner of your ground. The labor is small, the cost is nothing; the commodity is great; yourselves shall have plenty; the poor shall have somewhat in time of want, to relieve their necessity, and God shall reward your good minds and diligence."

SIX BEST APPLES. B. V. French of Braintree, Mass., who has probably given as much attention to the culture and examination of the different varieties of apples as any other person in the state, has given the following list of such varieties as stand first for productiveness, fair habit of growth, adaption to the climate, and fine quality, and affording a succession in ripening: *Early Harvest, Porter Fameuse, Rhode Island Greening, White Seeknoffer, and Baldwin.*

SET OUT TREES. A single tree in front of your house will confer the following benefits. It will increase the value of your estate—it will afford a shade for the children to play in—it will be grateful to the passing stranger—it will invite the birds to its branches, who will repay you in rich gushes of free music—it will add to the beauty of the city or town—it will prove you to be a person of wisdom, taste, liberality and public spirit. Will you not, then, do the simple deed which secures these great benefits? Now is the season to prepare for it—to purchase your trees and select your positions. The frost is fast leaving the ground, and everything is getting in readiness.—Sterne places the "planting of a tree" amongst the four cardinal virtues. Let all govern themselves accordingly.

The Markets.

The last arrival from Europe brought news of a great rise in the price of breadstuffs, which occasioned a corresponding movement here,—prices of Flour go-

ing up as high as \$9 50 to \$10 50; and Northern Corn \$1 30, in Boston. On the 9th inst., prices had declined,—Flour 75 cents, and Corn 10 cents. In New York, sales of Genesee Flour were made on the 9th at \$8 75. The decline is to be attributed to the facts that the immense stocks coming in from the west cannot be got off before the new crop comes into market—that the prospects of the new crop in this country and abroad are good—and that large quantities of wheat in Egypt and south Russia are waiting for transportation. At Detroit, June 3, Flour sold at \$5 85, and Corn at 37½ cents.

BRIGHTON MARKET. Prices rather declining.—June 7, Beef, \$5 25 to \$7 50. Sheep, \$1 75 to \$5 25.

BOSTON, JUNE 9. WOOL—lb.

Saxony Fleeces,	45 a 50
" prime,	45 a 50
American full blood,	40 a 45
" half blood,	32 a 33

PROSPECTS OF PORK-RAISING IN IRELAND. The following are extracts from letters received by a mercantile house in this city from a highly respectable source, dated

"*Belfast, I., April 3.*—I cannot help thinking, that we shall, during the ensuing autumn and winter, be worse off for pork in all its various shapes, from the head to the ham, than we shall for any other article. Pigs, as you may naturally suppose, have become almost extinct with us, and unlike grain crops, they cannot be resuscitated in a few months, nor will they be so for a few years, unless we have very low prices for our local productions of grain before Christmas."

"*Liverpool, April 3.*—We can expect but little pork, bacon, or lard, from Ireland for many a day.—The writer was through a large portion of the South of that Island last week, and a fat pig or even a few pigs together, was a rare sight! In fact, the whole imports into Britain from our sister isle this season, will not be over 9000 barrels against an average of 60,000 barrels! In the German States, also, the peasantry have no feed for their pigs; we must, therefore, look to you entirely for a supply, which augurs well, we think, for a maintenance of full prices."—*Boston Daily Advertiser.*

FARMERS' LIBRARY. Such of our readers as would secure the greatest amount of valuable agricultural matter at the cheapest rate, should take the Farmers' Library and Monthly Journal of Agriculture, published monthly at New York, by Greeley & McElrath, at \$5 a year in advance. The Library is a re-publication of valuable books; the Journal is similar in its plan to other agricultural journals, and is conducted by a very able and experienced hand. The Editor, however, is from Maryland, and as his Journal is intended for the whole country, it contains much that cannot be directly applicable in New England farming.

BACK NUMBERS. Nos. 1 and 2 can be supplied to new subscribers; if necessary, a second edition will be printed.

OUR SECOND NUMBER has been delayed a few days beyond the intended time of publication, which is the first day of every month.

SIGNS OF PROSPERITY.

FROM THE CHINESE.

Where spades grow bright, and idle swords grow dull,
Where jails are empty, and where barns are full,
Where church paths are with frequent feet outworn,
Law court yard weedy, silent and forlorn,
Where doctors foot it, and where farmers ride,
Where age abounds, and youth is multiplied,
Where Arrack's banished far from every place,
Where opium's curse no longer leaves a trace;
Where these signs are, they clearly indicate
A happy people and well governed state.

Muscular Strength.

The muscular power of the human body is indeed wonderful. A Turkish porter will trot at a rapid pace, and carry a weight of six hundred pounds. Milo, a celebrated athlete of Crotona, in Italy, accustomed himself to carry the greatest burthens, and by degrees became a monster in strength. It is said that he carried on his shoulders an ox four years old, weighing upwards of one thousand pounds, for above forty rods, and afterwards killed it with one blow of his fist. He was seven times crowned at the Pythian games, and six at the Olympian. He presented himself the seventh time, but no one had the courage to enter the lists against him. He was one of the disciples of Pythagoras, and to his uncommon strength the learned preceptor and his pupils owed their lives.

The pillar which supported the roof of the house suddenly gave way, but Milo supported the whole weight of the building, and gave the philosopher time to escape. In his old age, Milo attempted to pull up a tree by its roots and break it. He partly effected it; but his strength being gradually exhausted, the tree when clef reunited, and left his hand pinched in the body of it. He was then alone, and being unable to disengage himself, died in that position.

Haller mentioned that he saw a man whose finger being caught in a chain, at the bottom of a mine, by keeping it forcibly bent, supported by that means the whole weight of his body, one hundred and fifty pounds, until he was drawn to the surface, a distance of six hundred feet.

Agustus XI. king of Poland, could roll up a silver plate like a sheet of paper, and twist the strongest horse-shoe asunder.

A lion is said to have left the impression of his teeth upon a solid piece of iron. The most prodigious power of muscle is exhibited by fish. The whale moves with a velocity through the dense medium of water, that would carry him, if continued at the same rate, round the world in little less than a fortnight; and a sword-fish has been known to strike his weapon quite through the oak plank of a ship.

FASTING. Distinct from all religious ordinances, fasting has been frequently recommended and practised as a means of removing incipient disease, and of restoring the body to its customary healthy sensations. Howard, the celebrated philanthropist, used to fast one day in every week. Franklin, for a period, did the same. Napoleon, when he felt his system un-

strung, suspended his wonted repast, and took his exercise on horseback. This list of distinguished names might, if necessary, be increased. Baglivi, the celebrated physician, mentions, that during Lent, an unusually large proportion of the sick in Italy recover their health.

Wood for Coffins.

This is a grave subject, and has enlisted the attention of an English paper, which says married people should be buried in pear-tree coffins, chronologists in date tree, brick-layers and plasterers in lime-tree, pugilists in box wood, schoolmasters in birch, old bachelors in elder tree, cowards in trembling aspen, the honest tar in sturdy oak. The list may be extended by adding: Misers in chest-nut, inconsolable maidens in pine, democrats in hickory, whigs in ash, politicians in slippery elm, authors in pop(u)lar, millionaires in plum, old soakers in cherry, pretty women in sugar maple, handsome folks in dog wood, clam-catchers in beech, soldiers in lance-wood and hard-hack, dairy-maids in butter-nut, dandies in spruce, fishermen in bass-wood, poets in laurel, horse-jockies in horse-chestnut, hatters in fir, shoemakers in their own tree, blacksmiths in iron-wood, book-binders in boards, lovers in the tulip-tree and sigh-press, coquettes in witch-hazel, travellers in sandal-wood, gardeners in rose-wood, landscape painters in birds-eye maple, carpenters in the plane tree, misanthropes in crab apple, odd fellows in the palm tree.

The following may also be considered very appropriate plants for decorating the graves of different craftsmen, professional men, &c. Watch makers the "four o'clock" and thyme, sextons of churches cantebury-bell, surgeons boneset, astronomers night-shade, upholsterers fringe-tree, dry-goodsmen calico plant, fortune hunters marygold, spendthrifts, the bill-berry, scribblers the calamus or jonquille, cooks the pansy or buttercup.—*Horticulturist.*

A BREAKFAST IN THE FIFTEENTH CENTURY.—What would our modern ladies say to a breakfast like the following being laid before them at six o'clock in the morning! We copy it from an old work on the Manners and Customs of the Fifteenth Century, by Edward Mullen. It is in the form of a tavern bill, from a landlord "in the good city of Chester." "Breakfast provisions for Syr Godfrey Walter, and Ladie Walter, and their fair daughter Gabriel—three pounds of saved salmon, two pounds of boiled mutton and onions, three slices of pork, six red herrings, six pounds of leavened bread, one chappan of mead, five chappans of strong beer."

HONORS TO AGRICULTURE. The British Government has given a life pension to the widow of Mr. Loudon, in consideration of the great utility of his writings on agriculture and horticulture.

LABOR. Remember that labor is necessary to excellence. This is an eternal truth, although vanity cannot be brought to believe or indolence to heed it. *Randolph.*

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. I.

WINDSOR, VT., JULY, 1847.

No. 3.

THE SCHOOL JOURNAL.

Teachers of Common Schools.

[The Essay from which the following passages are taken was written for another purpose, but never used, and has lain in the writer's desk longer than Horace directs a poem to be kept,—*nonum prematur in annum.*]

MORAL QUALIFICATIONS OF TEACHERS.

"I will infuse good principles and habits into the children,"—said Fellenberg—"for in twenty short years these children will be men, giving the tone and the manners to the nation. And here—pointing to a number of young men—here is the great engine upon which I rely for effecting the moral regeneration of my country. These are masters of village schools, come here to imbibe my principles and to perfect themselves in their duty. These men have 600 pupils under them; and if, by the blessing of God, I can continue the direction of them, success is certain." Observe the great point at which this distinguished Educator aims. "I will infuse good principles and habits into the children,"—not, "I will teach them this and that, make them prodigies of intellectual acquirement, fill them with the knowledge that puffeth up, or teach them only what will be *useful*"—so the fashionable word is,—meaning what can be best turned to some pecuniary account in after life. So have thought all great educators from the institution of the family school by God himself, to this day. So far as the culture of childhood is concerned, this is the great central idea of the family constitution. In the family, according to the idea of it, all affections and plans centre in this,—good principles and habits. Children are placed by the very processes and impulses of nature under the protection and care of those who may be expected to estimate most highly their moral character—their spiritual well-being. The parental affections, among those whose hearts are right with God, impel, with sleepless and mighty energy, in this direction. The Christian parent's desire of high intellectual powers and acquisitions for his child, will be weak and of little influence in comparison with that which manifests itself in unceasing and prayerful vigilance that the object of his love may be trained up in the way that he should go. Indeed—leaving out of the account the child's destinies in another world, and even his success and happiness in this,—the parent's own peace and happiness are made, in the arrangements of Providence, to depend so intimately on the moral character and habits of the younger members

of the family, that self-interest is strongly enlisted in favor of good principles. Nothing but the deepest depravity can break through the defences with which God has "hedged us round" in this respect. The strongest and most enduring principles of our nature are thus enlisted to give due pre-eminence to the *moral* culture of the young. So in all ages—even among those who had not the light of the written Word—so have the wise read the indications of wisdom and duty.

Let us fix attention on this great fact. We have only to examine the plan of Infinite Wisdom, and to shape our plans accordingly. If God has assigned the first place to moral and spiritual culture, we shall not err in doing the same. If in the arrangements ordained of God the first place among the qualifications of those who have the care of the young, is assigned to those of the heart,—of the affections and the will,—we shall not err in arranging in the same order the qualifications that ought to be found in the teacher of a common school. God has placed the child under the parent's care. What is most essential in a good parent ought to be considered most essential in a good teacher. He must love children,—and that with a forethoughtful love, which will not postpone future character and well-being to present ease or pleasure—he must feel the paramount importance of the child's moral and spiritual interests—he must be quick-sighted to observe indications of intellectual promise, and yet more so to detect the buddings of moral good and evil—he must be hopeful and patient—his character and his manner towards his pupils must be such as to secure perfect respect and confidence.

"O'er wayward childhood would'st thou bear firm rule,
And sun thee in the light of happy faces,—
Love, Hope, and Patience,—these must be thy Graces,
And in thine own heart, let them first keep school."

The teacher should have correct views of the dignity, importance, and sacredness of his vocation. He should be able and disposed to conduct his school with an enlightened regard to the wants of society, and to the great ends of human life. Views thus elevated should be habitual with him, furnishing both guidance and impulse in the discharge of every duty.

"The most immediate and the most important aim of all instruction is, to train up and complete the Man; to ennoble his heart and character; to awaken the energies of his soul, and render him not only able but disposed to fulfil his duties. In this view alone can knowledge and talents profit a man; otherwise, instruction, working upon sterile memory and talents purely mechanical, can be of no high utility. In or-

der that the teacher of a common school may make his pupils virtuous and enlightened, and prepare them to act the part of virtuous and enlightened men, not only must his own example be without reproach, but his conceptions of the character and duties of a citizen must be worthy, and he must act always under the influence of worthy motives that lay hold on eternity. His character should be not only pure, but noble; he should love, not knowledge merely, but the True and the Beautiful." For none but he that possesses this character himself, will desire to impress it upon others.

WHERE SHALL WE FIND TEACHERS?

But with what reason can these qualifications be expected to be common among any of the classes of young men to which our schools are mostly indebted for teachers? By the great majority of teachers among us, the business is resorted to simply as a means of obtaining funds to help themselves on in academical or professional study. Often without confidence in their own knowledge and skill, and fearful of the loss of authority, they feel themselves in a position antagonistic to their pupils, and cannot move among them with that sense of mutual confidence and common interest in the great object of the school, which is essential to success. They enter upon the business without any just views of its importance, or of the duties involved in it. Expecting to teach but a few months, or at most but a few seasons, they are never excited to study the whole subject, as they would were it regarded as their business for life.

Shall we then reject these young men, and say they must not teach? That would blast the cherished and worthy hopes of many a youth of high promise, who needs this resource to aid him in his honorable pursuit. It may well be doubted, too, whether well-qualified teachers can be more readily found in any other class, than in this. Were they debarred from the employment at once, who would supply their place? As a class, these are among the most promising candidates for the employment. They have more both of the moral and the intellectual qualifications, than any other. They are more generally able to form some adequate conception of the dignity and importance of the employment, and of its great ends in reference both to individuals and to society. Were it an object to prepare a class of teachers for our common schools with the best qualifications in the least time, we should naturally look to the ingenious minds and warm and pious hearts to be found in the higher and more mature classes in our academies, and in our colleges.

Whether it is desirable that we should have a class of men devoted to common school teaching, with no ulterior views, is a question that it is of little use to discuss. We cannot, if we would, have such a class of men for many years.

How, then, shall we turn to the best account the means and arrangements that we already have?

3. Let instruction on education, especially on popular education,—on the best methods of teaching, and on the management and moral culture of schools, be introduced into our seminaries as part of a course of

liberal studies. I put this in the form of a suggestion merely, and only ask that it may be considered. Suppose such courses were given, and attendance on them required of all, whether they expect to be teachers or not. Is the subject so unimportant, or so poorly adapted to discipline the mind and form the character, as to exclude it from among the objects of attention at college? Is it not, on the contrary, of the very highest importance to all classes of men? Ought not all men, and those of liberal education especially, to understand it at least so far as to be able to act wisely and efficiently in their several spheres, in the promotion of correct views and plans? Is there any class of duties of a public nature to which educated men are more generally called and for which there is a more evident pressing necessity that they should be qualified, than those connected with common schools? Would not such courses, conducted wisely and with spirit, tend to give new life and a new character to our whole common school system? And as to discipline, intellectual and moral, would not the introduction of something of this kind make it more complete and salutary? Might it not be so managed as to have a most excellent effect on the characters of young men? Might it not be made the means of habituating the intellect and the kindest and noblest feelings of our nature to act happily upon and with each other? In the whole circle of pursuits now embraced in a college course, is there any thing equal to it in this respect? I am aware that there are objections, and am by no means prepared for a thorough discussion of the subject. I suggest it for the consideration of those who are better able to examine and decide.

For the School Journal.

Drawing in Schools.

I suppose nothing is more uninteresting or perhaps wearisome to the practical teacher than the plans and speculations of mere theorists, for the improvement of schools. Never having belonged to the first mentioned honorable body, my remarks will of course be received with all due discount as coming from the latter; still, the acquaintance that I was enabled to make with the district schools of this town whilst holding the office of Town Superintendent last year, being an agreeable one, I hope will not soon be forgotten by me,—and in spite of the disadvantages under which I was sensible I was laboring, I could not dismiss from my mind the belief that our schools were really in need of some improvement.

Our State Superintendent, among many other excellent things, recommends that pains should be taken to make our schools the most attractive place of resort to the scholars; a recommendation unquestionably of primary importance. But when I have witnessed many of the smaller children compelled to sit for hours with nothing but their spelling book or primer before them, I have queried, how far has his recommendation been carried into practice? and what is there in this monotonous stillness calculated to win the child's affections to the school? To remedy this evil I distributed in some schools, (the gift of J. Holbrook,) several detached leaves of his 'Child's First Book,' (a copy

of which I inclose) proposing to the teacher in some cases to allow the smaller children the use of a slate and pencil with one of the leaves for a copy. And as an inducement to the older scholars to try their hands at drawing, out of school hours, I have occasionally showed them specimens of the drawings and maps of the scholars in the public schools of New York, (some of which I have also sent you.) It is almost needless to say, that the proposition met with various kinds of reception, but no substantial objection was raised against it.

It is a trite saying that "Any one that can learn to write can learn to draw." I am pleased to observe that the converse of that saying is beginning to be received as equally near the truth, 'that he that has learned to draw has more than half learned to write.' As Simpson truly says, "Drawing is no more than writing down objects," and as the figures of domestic animals, flowers or other objects from the great storehouse of nature, or buildings, or articles of furniture, are far more likely to attract a child's attention and convey some *idea* to the mind, than those arbitrary signs, called letters of the alphabet; so would he be more likely to attempt to imitate them. And when once he has acquired the habit of fixing his attention, of endeavoring to comprehend, and finally of trying to imitate the pattern before him, a foundation is laid for progress in learning—he becomes a cheerful, willing student: and further, when he has succeeded in drawing the gable end of a house, no matter how rudely, how easy for the teacher to show him with a trifling alteration that he has made the first letter of the alphabet; and after the oxyoke, B, and so on.

But I need not rely entirely upon the *theory*. I am happy in being able to say that I have witnessed in this neighborhood some of the good effects following the *practice*. In a summer school, made up, of course, of young scholars, and during a visit I paid the school a few weeks after leaving the 'Drawing Book' alluded to, on the invitation of the teacher to show their drawings, nearly one half of the scholars exhibited their slates, having on them some good imitations of the copies, and with countenances too, lit up with smiles that told of the *delight* that at least one of their studies had afforded them—a striking contrast indeed to the wandering eye, and listless yawning, which generally accompanies the b-a ba, b-i bi, b-o bo, and other lessons of equal interest.

It would not be difficult to cite many testimonies, particularly from the Reports of the County Superintendents of schools in the State of New York, in favor of Holbrook's plan of instruction, which includes the use of this little book among many other means equally rational and interesting, and on which I may at some other time trouble you with some remarks, should the foregoing meet with a favorable reception.

H. M.

Monkton, 6 mo. 29, 1847.

MECHANICS' INSTITUTIONS. It is calculated that the 400 mechanics' institutions of Great Britain, comprise 80,000 members, possess about 400,000 volumes of books, raise about £30,000 a year, and occasion the delivery of nearly 40,000 lectures.

Edinburgh Sessional School.

AN INTERESTING AND INSTRUCTIVE EXPERIMENT.

It has been a frequent complaint with parents in New England that their children become corrupted at the district schools. We recollect a series of articles in one of our newspapers, in which the writer represented our common schools as 'schools of vice,' and called loudly for a reformation. There can be no doubt of the fact that many children have become initiated into vicious habits, that they have learned profane and filthy language, become familiar with impure thoughts, and that their evil passions have been developed and strengthened through the influence of school-mates.—No one will say that this is *unavoidable*,—that it is a necessary evil. It is a fault of the schools that can be remedied; and one therefore to which the attention of the friends of education should be earnestly directed. There are schools, and we believe not a few, in which this evil is not seen at all. In others there is comparatively little of it. Some, so far from being "schools of vice," have proved very decidedly schools of virtue; and indeed, such, after all, is evidently the character of the great majority of them. If they accomplish little in comparison with what they ought in this respect, they yet do something. Let us aim to make them the fountains of an influence altogether good.

At the beginning of the year 1819, there occurred in Edinburgh scenes of riot and bloodshed which revealed an extent of youthful depravity in that city which startled and astonished even those who had spent their lives in the midst of it. In this discovery originated the measures which finally resulted in the establishment of the *Edinburgh Sessional School*, an able account of which, drawn up by John Wood, Esq., we have before us in a volume of 200 pages. The school was commenced with immediate reference to the *character* of the children. Many of them were growing up unable to read, more unable to understand what they read, and all exposed to sad influences that manifested their power in gross wickedness and boded ill for the well-being of the community. The book before us was written after the school had been in operation fifteen years. Its results on the character of the children are described in the following paragraphs:

"Of the changes which their education and new habits have operated upon the characters of our pupils while within the walls of the seminary, we have ourselves witnessed many very pleasing instances. Many who entered it, and that not at the very earliest stage of life, quite ignorant and regardless of religion, have there become deeply interested in its important truths, and to all appearance at least strongly impressed with a sense of the moral obligations which it imposes.—Some who were originally addicted to lying, and to every species of meanness, and were on that account shunned by their companions, have, under the influence of the religious and moral discipline of this institution, and of that high tone of right feeling and sense of honor which it infuses, been altered into beings of apparently a quite different stamp. In nothing, however, has such an amendment been more con-

apicuous than with regard to temper. Often has it been our delight to behold sullenness and discontent converted into gratitude and satisfaction,—to see the gathering storm upon the brow dispelled by a single look, and giving way to a mingled smile of shame and of grateful recognition, and even to hear from the lips of the pupils themselves an acknowledgment, that their parents at home had remarked a striking change upon their temper, from the period of their entering our institution. That profane and disgusting language too, which is elsewhere so common in this class of society, is here never heard without exciting in the minds of the pupils the strongest feelings of horror and aversion. It is indeed almost never heard at all, except from those who have been recently admitted : and if, on any occasion, it escapes from an older scholar, it is immediately regarded as a sure symptom of his having fallen into far worse company than that of his school-fellows. In one of the very few instances of this kind which have occurred for some years in this school, we received intimation of it from the monitors. We spoke to the boy on the subject, and inquired particularly about the company which he kept. He appeared however quite sullen and hardened, and would give us no answer. We then sent for his father, and, after telling him what had occurred, put to him the same question about his son's company. He at first said that he was not aware of his son being in bad company ; but, after a single moment's recollection, he added, " I fear, Sir, you are right : his mother and I have sometimes been saying that he stays longer out at night now than he used to do." We begged his father to keep a strict eye upon him, promised that we should do the like while he was in school, and told him at the same time that, if the boy's bad habits continued, he must be removed from the school to prevent his example from contaminating others.—From that hour there was a marked improvement in his conduct, and he afterwards told us that at the former period he was in the practice of being every night about the stables of a place of public entertainment, than which there can hardly be a worse haunt for young people. That for a time at least this institution was thus the means of rescuing the boy from extreme jeopardy, it is quite impossible for any one to doubt.

"The improvements introduced into the system of education practised in this school, have in no slight degree tended indirectly, as well as directly, to promote that moral reformation of which we are here speaking. Of the indirect methods to which we allude, the fondness which the pupils have acquired for school, has in a particular manner operated most strongly and beneficially. When we first knew the school, the children there, as in most other seminaries, as soon as they could read tolerably well, were anxious to persuade their parents, that they had now gotten enough "learning," and in consequence were permitted to spend a most perilous interval, between the school and the workshop, in idleness, and exposed to all the temptations of a great city. Now, however, since their education has been rendered more interesting, the boys are eager to remain till a master is found

for them. On various occasions have we had conversations similar to the following with their parents :—"Our John's a braw reader and writer and coonter, but he's no' for coming awa' frae the school."—"What do you mean to do with him?" "Just let him do what he likes till he gangs to a trade." "Are you going to send him soon to a trade?" "Eh na ! he's no' near auld enough for that yet." "Is he not then much better here than wandering about idle in bad company?" "That's very true ; I dare say he's quite right himsel' ; we'll e'en let him bide." The consequence is, that the boy generally remains till he enters upon his apprenticeship, without even a single day's interval ; and is thus preserved from one of the most perilous situations in which youth can possibly be placed."

The reader will agree with us, that such a school is worth examining, and that a good account of its management may be expected to furnish valuable instruction. The school is very large, and is monitorial. We propose to notice only some of the particulars in which its experience may be of use generally among us. We begin with

THE QUALIFICATIONS OF TEACHERS.

While it is acknowledged that, other things being equal, the ablest and best informed teacher is to be preferred, yet no degree of learning and general ability can supply the place of *activity*, *enthusiasm*, and *tact*. The teacher, says Mr. Wood, must be the life and soul of the school. If active and enthusiastic, the school will, to some extent, partake of his energy ; and without energy and zeal no school can do anything. A moderate degree of scholarship, combined with energy, zeal, and *openness to teach*, will ensure success. These are the means by which the school is to be made attractive, so as to prevent truancy, and the legitimate employments of school interesting, so as to leave no room for listlessness or love of mischief.

On the subject of *tact*, we copy a single paragraph :

"Among other particulars which aptitude for teaching implies, we may mention the communication of any particular piece of instruction at the time, and in the manner, in which it is most likely to arrest the attention of the pupil, and to make the most lasting impression upon his mind,—and a readiness to suggest, or rather to draw forth from himself familiar illustrations of every subject, adapted to his age, and to the other circumstances, in which he is placed.—The opportunity afforded for consulting all such circumstances, in the pupil's condition, is certainly one of the superior advantages of domestic education, though counterbalanced, where the education is wholly and exclusively domestic, by many great disadvantages. But we are by no means to imagine, that a public teacher has no room for exercise of this important *tact*. Even in the largest schools, where education must of course be conducted in a more regular, and even somewhat mechanical method, not a day passes, which does not afford ample scope for its beneficial exercise, in consulting the capacities and inclinations not merely of a whole class, but even of individual scholars. The curiosity of a young person, as

Locke has well observed, ought by no means unnecessarily "to be balked," and the teacher, who is persuaded of the truth of this philosopher's observation, that "a child will learn three times as much when he is in tune," as at any other time, is much more likely to put his pupils in tune, and to find them in it, than he who consults only his own inclination, or moves continually in the same unvaried round. A single rash rebuff or cold reply, given to a child at a moment when his curiosity is most ardent, may mar for life the most promising scholar."¹

Several topics connected with teaching and management will claim notice hereafter.

*The fact, which we are now recommending, may perhaps be best illustrated by an incident of actual occurrence. We on the occasion to which we allude, happened to notice, that one of our best arithmeticians was not in his place. On looking round the room, we found him at the atlas with another scholar. The truth was, the boys had solved the question proposed in the arithmetic, and had gone to the map to settle a dispute they had about the course of some river, knowing well that they would be in their place, before all their companions were done with the question, which they had already solved, and a new one would be given out. On noticing this circumstance, the person who was then master of the school, observed, "They are becoming too keen about rivers," and was disposed to chide the boys.—Taking him aside, we answered, "It is this very keenness, which has made our school what it is, and we must beware how we blunt it." There was here, it was true, a breach of order, and one which, if allowed to become a practice, would have been very prejudicial, still we are persuaded, that in the particular circumstances, it would have been most inexpedient to have employed reproof, and for ourselves we own it was an irregularity of a kind, which we never witness without secret delight.

School Government.

1st. *As far as possible govern the school through the studies.* The teacher who will make himself so familiar with the lessons of the several classes that he can deeply interest his scholars at their recitations, will find comparatively little trouble in maintaining that degree of order and stillness which are desirable. Children love to receive new ideas; and when they are doing this every day, they will love study; and scholars who love study rarely give the teacher trouble. When the teacher does no more than hear scholars say the given quantity of lesson, then committing lessons, reciting, and the whole business of the school will be received as a drudgery by pupils; and roguery and idleness will prevail just as far as fear does not operate to restrain. Study will not be loved and pursued for its own sake, but from fear of punishment.

We say, then, give scholars as much as they can do, and throw as much interest as possible into the exercises of the school, and you will do much to secure order and quiet. The school must be well furnished with books, in order that the teacher may do this. If parents do not provide the necessary books, teachers should inform the proper authorities of the fact and see that it is done; for a scholar who is destitute of the means of study is a constant trouble to his neighbors, and a constant subject for correction. *To sit still and have nothing to do* has been deemed suffering too severe or too useless for the convicts of our

jails and prisons; and children, whose whole physical nature rebels against such treatment, cannot and will not submit to it. If quite young, they should be permitted to have frequent recesses; and thereby they will be relieved of their restlessness, and much of their childish waggonery will work off through their heels. After they are seven or eight years of age, none but idiots can be kept orderly without employment. How often in visiting schools, have we seen scholars who had nothing to do exercise their gifts in all manner of manipulations—a constant annoyance to the teacher.

2. *Have the atmosphere of the school room in a healthful state.* "Why is it," said a teacher to a gentleman, at the close of school one afternoon, "that my scholars behave so much worse the latter part of the day? I have to scold and whip as much again in the afternoon as in the forenoon, and the last hour of the day every thing goes wrong." The difficulty was simply this: the atmosphere of the room was full of poison. The house was about twenty feet square, and the room was seven feet high. Fifty pair of lungs had breathed over the air till all the oxygen was consumed; it was not only so much heated as to deaden all mental action, but it was exhausted of its principle of life and incapable of imparting health and vigor to the physical system. The scholars were restless, and the teacher was nervous; all profitable study was out of the question; little things, which, in the healthy atmosphere of the morning, were scarcely noticed, irritated the nerves of the teacher, and he, supposing the difficulty was in the scholars, cut and slashed, with tongue and ferule,—all to no purpose. We would say to every teacher, in this condition,—*"Stop just where you are! raise the windows, open the door, knock a hole through the ceiling, send the scholars out door, or take some other method of restoring a healthy atmosphere.* All your scolding and whipping are evil and only evil!" School visitors will bear testimony to the fact, that, for half the time during the day in most of our schools, the air is unfit for the scholars to breathe. Often the visitors are under the necessity of sending the scholars out, and opening the windows, before they can remain in the school.

Much of the noise, restlessness, vexation, scolding and punishing, would cease in our schools if the school rooms were larger, and provisions made for their ventilation. A thermometer should be in every school, and the teacher should see that the proper degree of warmth is preserved. The air should be as healthy and invigorating at three o'clock P. M. as at the opening of the school in the morning. True, some of our school houses are ventilated enough; the currents of air come in from every quarter,—from the ceiling, the floor, the walls, the windows, the door, from a thousand crannies in all parts of the building, enough to keep the children coughing with colds all winter. But a large, comfortable school room, provided with a ventilator in the right place, is rarely found in the districts of our State. Since stoves are substituted for fireplaces, the evil of a bad atmosphere is much greater than formerly, and teachers should turn

their attention particularly to a remedy; the quiet, order, health and improvement of their scholars demand it. They will find their own dispositions more kind and uniform in a healthy atmosphere; and the degree of noise and vexation often depends as much upon the *feelings of the teacher at the time*, as upon the state of the school. When a teacher is in an irritable state, punishable offences multiply; he notices many things which otherwise he would pass over, and the scholars will really conduct badly.—*Conn. School Manual.*

For the School Journal.

Multiplicity of School Districts.

It is very much regretted by the friends of schools in this State that our towns are divided into so many districts that are, many of them, necessarily small. Perhaps there is scarcely a town in the State, where the number of districts could not be diminished, much to the interest of schools and the public generally.—Very many of the small and feeble districts, such as are able to have but little schooling, and can employ none but cheap and incompetent teachers, might be much benefited by being annexed to larger districts, where they could secure the services of better teachers, and enjoy the advantages of better schools and for a greater length of time each year.

Subjoined is a table giving a list of ten counties in the State from which full returns have been made, as published in the last annual report of the State Superintendent, with the average number of districts in the towns of each county—the average number of heads of families—number of children between 4 and 18 years of age, and the number of scholars that have attended school in each district. The estimates are made from statements in that report.

COUNTIES.	Average No. of districts in each town.	Average No. of heads of families in each district.	Average No. of children between 4 and 18 years of age in each district.	Average No. that have attended school in each district.
Hennington,	8	17	41	31
Caledonia,	13	13	33	29
Essex,	4	10	22	10
Grand Isle,	5	19	52	35
Lamoille,	10	12	32	15
Orange,	16	11	30	22
Orleans,	6	12	35	23
Washington,	11	14	35	22
Windham,	12	13	31	23
Windsor,	16	16	34	

From this it appears, that the average number of districts in each town is ten, each on an average containing fourteen heads of families, thirty-five children that draw public money, and only twenty-three that attend school. This would make a small school; and when it is considered that there are, in almost every town, one or two villages, that are formed into large districts, it will be seen that there are many districts on the borders of the town, that are very small and quite unable to support their schools properly.

In the town in which the writer resides, (Cabot) there are seventeen districts, and it might with great justice be said that, were the interests of the schools in the town consulted, the number of the districts would be reduced to twelve, or nearly three-tenths

less than it now is. Admitting this ratio to be a correct one for all the towns in the ten counties above named, we find the average number of districts in each town should be reduced from ten to seven; and as the whole number of districts in those counties is 1787, they would, by this ratio, be reduced to 1261 or 426 less than there are now.

It appears then, that of the 1787 districts, there are 426 that might be united with other districts, and in this way the expense of sustaining 426 districts with houses, teachers and fuel, would be dispensed with, while the scholars in those districts would have the advantage of better schools, and an opportunity to attend for a greater number of months in the year.

Yet with all these and many other facts before us, it must be admitted that the "mischievous tendency to multiply school districts," not only prevails, but is daily gaining strength among us, and it is very important that the "public mind be forcibly impressed with the fact that the efficiency and usefulness of our schools urgently require, at least, that limits be set to it."

In my next number I will endeavor to mention some of the causes of the evil and propose a plan for remedying it. L.

Improvement in Rhode Island.

Till recently, Rhode Island has not done her duty, in relation to educating the masses; a most gratifying change, in this particular, has taken place within a few years. The public mind is now effectually aroused on the subject of popular education; and well devised plans for its attainment are being executed under the judicious management of H. Barnard, Esq. superintendent of common schools. No State in the Union is doing more, according to the population, for the education of her sons and daughters. For this she will be rewarded by the intelligence of her citizens, when they are at home, and will be honored by other States and nations, when they are abroad. An interesting fact in connection with this subject, is found in the improvement made in school-houses. The old, ill-contrived, uncomfortable houses are giving place to large, commodious, well arranged and well ventilated houses, where everything has that peculiar air of neatness and comfort so essential to the health and progress of the pupils. Let me say in this connection, too, that the ministry of Rhode Island furnishes many of the most ardent friends of common schools. Upon this altar they cheerfully consecrate the time that can be spared from the more immediate duties of the ministerial office.—*Reflector.*

SWEDISH CHILDREN. Mr. M'Donald, in his travels through Sweden, says:

"Young children, from the age of one, to that of eighteen months, are wrapped up in bandages, like cylindrical wicker baskets, which are contrived so as to keep their bodies straight, without interfering much with their growth. They are suspended from pegs in the wall, or laid in any convenient part of the room, without much nicety, where they exist in great silence and good humor. I have not heard the cry of a child since I came to Sweden."

From the School Manual.

Summer Schools.

MR. EDITOR. I have taught school several summers, and expect to teach again the coming season; and you will do me and others a great favor if you will tell us how to keep children awake and interested during the long, warm days. Some of our school houses are small, and destitute of blinds and curtains, (only as we put up newspapers or cotton cloth before the windows,) and the light is blinding to the eyes, and the heat oppressive. Scholars are dull and sleepy, and many of them will stay out of school when they can. Some of the older boys will go off into the fields and woods, and spend half the day, sometimes all the day, rather than be in the school house. The small scholars have no books adapted to their age and capacities, and they must necessarily sit idle while the older ones are reading and reciting. The very smallest I put to bed, both for my sake and theirs; for the little creatures cannot sit still on such seats as we have, and it seems cruel to demand it. I doubt whether the inmates of our gaols and prisons suffer half as much from confinement and want of comfortable situations as our children.

But let this pass. What can we do, during the warm months, to interest and instruct small children? What studies would you recommend? What methods of teaching? What general exercises to wake up and improve the mind? Tell us some *little things*, for we have little minds to deal with. Can you not invent something adapted to our capacities? You talk learnedly enough about high attainments and mental discipline; now please tell us *what to do to secure these*, and receive the thanks of one

FEMALE TEACHER.

In the first place go to the committee-man and tell him you want a large blackboard, (if you have not one,) four or six feet long, and two feet wide. Place this in a position where the smallest children can use it, and several times a day exercise all the classes of the school at the board. Have the letters of the alphabet printed on it for the youngest, and teach them to make the letters. Children three or four years old can be taught to make letters, and they will learn their names in five days by this method. Write words, and teach those who are beginning to read, to write words and read them from the board or slate. Let all the small children have slates to practice upon the copies you set for them. They will acquire much that is valuable in this way; the plan will busy them, and lighten and shorten the long hours of the summer day. There is nothing like *employment* to interest and profit children. We well remember the painful sensations of our young, school-boy days. *Nothing to do!* Only go to the teacher and say a few letters or words after her, then—"Go sit still and fold up your hands." To have used a slate would have been an offence punishable by the laws, and the floor of the school room was the only black-board. If we fell asleep and tumbled from the plank, we were cuffed for noisy behavior, picked up and dropped upon our seat with a bounce that kept us awake for the next fifteen minutes.

Humanity has come to the relief of the *idle prisoner*, and given him something to do; thereby relieving him of nine-tenths of his suffering. And I have some hope for the thousands of little children in our schools, too young to study books, and doomed, six hours a day, to the most insupportable of all suffering to a healthy vigorous child, that of *sitting still and doing nothing*; suspended often between the heavens and earth, on a backless plank, with no resting place for the soles of their feet. Give them *employment*. Set them to *doing something*, while the larger scholars are reading and reciting. Let them go out twice in a half day, and remain, if the ground is dry, twenty or thirty minutes. Call them round the black-board several times a day, and exercise them in a great variety of lessons; numerals, figures, arithmetical tables, drawing geometrical figures, and a great variety of objects, the sounds of letters, punctuation marks, any and every thing which you can think of that is adapted to their capacities, and calculated to interest and instruct them. Children old enough to be taught the elements of geography, can be profitably occupied a portion of the day in drawing the shape of the states and countries as given on the maps. As soon as they can make letters, have them spell words by writing them. There are several books which contain a great variety of exercises for small children, and the teacher should have one such book at least, to suggest topics for practice.

The black-board can be used with great profit in drilling all the classes of the school. The more it is used, the more thoroughly will the school be instructed.

Another thing; have a few simple tunes for the school to sing; and when the scholars get tired or dull, strike up, and have all join in the song. This will wake them up and inspire them with new life.

During some of the more pleasant days, spend an hour in going into the woods or fields, and teach all the school the names of trees, vegetables, birds, insects, minerals, &c. Tell them the uses of all these various objects; and in this way you will keep their minds awake, cultivate their faculties of observation and attention, as well as give them much useful information. After a ramble of this kind, let the older pupils write a description of what they have seen, and tell what they have learned. In this way you can find the best topics for grammar lessons. Parents will not object to this course, if proper attention is paid to the conduct of the children, and they find that their children are interested and improved by it. By this untiring pleasure with study, you will do much, *very much*, for the intellectual and moral welfare of your scholars.

Permit us to say that almost everything, as it respects the interest and profit of your school, depends upon yourself. Give your school new ideas every day, and you will find little trouble in keeping the children awake. A teacher of small scholars must know a little of great many things, and cultivate a tact at illustration. A child's mind does not follow a course of consecutive reasoning, or any thing else, only for a moment at a time. But it is naturally on the alert, always inquiring, and curious to know every-

rything. To follow it aright, and happily to instruct and develop it, demands more skill than to teach a class of college students. And it is more important to have right instruction in childhood than at any future period in life.

Finally, ask the district to furnish good curtains for the windows; we would say, *blinds*, were it not a hopeless enterprise to undertake. Parents will have blinds for the meeting-house, where they are needful three hours a week; but rarely will they have them for the school-house, where they are needed *thirty-six* hours a week; and needed more for the school-house, because the eyes are in constant use. But they will furnish curtains; if not, take all the old Whig and Democratic and Abolition newspapers, and do the best you can; then call upon the Female Charitable Society, and if this or some benevolent institution will not listen to your "Sorrows of School Keeping," call upon the Manual and you shall have a few *contrasts* to set their *consistency* in a true light.

Arithmetic.

Arithmetic is a science as well as an art, it is therefore possible for one well acquainted with the *properties* and *relations* of numbers, when a question is proposed for solution, not only to be able after two or three trials, to obtain the required result by the application of some arbitrary rule, but to see readily, if not at once, what operations are required, and then to perform them in the shortest manner and to obtain the required result with the least possible number of figures. Hence it is well known to the observing that many of the processes required in every day practice can be greatly abbreviated. The contractions in multiplication are numerous and important, but most of them may be included in a few general classes, of which we name,

1. Those based upon the *decimal relation* of numbers. Of these the most numerous are the cases of multiplication by the *aliquot* parts of 10, 100, 1000, &c., all of which are governed by one general rule, viz: Annex one or more ciphers to the multiplicand and divide that result by the denominator of the common fraction denoting the aliquot part of 10, 100 or 1000, which the multiplier equals. Hence,

To multiply by	5,	(1-2 of 10)	annex one cipher and divide by 2.
"	3 1-3,	1-3 of 10	" " " 3.
"	2 1-2,	1-4 of 10	" " " 4.
"	1 1-4,	1-8 of 10	" " " 8.
"	50,	1-2 of 100	" two ciphers " 2.
"	33 1-3,	1-3 of 100	" " " 3.
"	25,	1-4 of 100	" " " 4.
"	16 2-3,	1-6 of 100	" " " 6.
"	19 1-2,	1-8 of 100	" " " 8.

From these specimens, the rule for multiplying by the aliquot parts of 1,000, as 500, 333 $\frac{1}{3}$, 250, 166 $\frac{2}{3}$, 125, 83 $\frac{1}{3}$, 62 $\frac{1}{2}$, &c., can be easily formed. To multiply by 9, 99 or any any number of nines, annex to the multiplicand as many ciphers as there are nines in the multiplier and subtract the multiplicand from that result. The process of multiplying by eleven may also be shortened. To multiply by 15, annex a cipher to the multiplicand and add half the multiplicand to that result. Other classes of contractions may be named hereafter.—*Ohio School Journal*.

THE CARELESS GIRL. The careless girl is always unfortunate. If she goes into the kitchen, to assist about the work, she splashes the water upon the wall; drops oil on the floor; spills fat in the fire; scorches her clothes; burns her cakes; breaks the crockery; or cuts her fingers with the carving knife. If directed to sweep the keeping room, she oversets a lamp, or brushes off a table cover, and sends Bibles and hymn books sprawling on the floor. Or, if passing through the parlor, she swings her dress against the centre table, and brushes off costly books, bruising the fancy binding, and soiling their gilt edges. Every where she goes, something is found in ruins. The trouble is, she does not *think*—she does not observe—or else her thoughts and observations are on something besides what is before her. She does not mind what she is doing—she does not look to see what she steps on, whether her hands have firm hold on the article she takes up. If she passes through a door, she does not mind whether it was open on a warm summer's day, she will close it; but if she finds it carefully shut on a freezing day in mid-winter, she will leave it wide open.

By indulging such habits as these, an amiable girl, who may otherwise be beloved, becomes the dread of all her acquaintances.

NEVER GIVE A KICK FOR A HIT. I learned a good lesson when I was a little girl, rejoined Mrs. Fairweather. One frosty morning I was looking out of the window into my father's barn yard, where stood many cows, oxen, and horses waiting to drink. It was one of those cold snapping mornings when a slight thing irritates both man and beast. The cattle all stood very still and meek, till one of the cows attempted to turn round. In making the attempt she happened to hit her next neighbor; whereupon the neighbor kicked and hit another. In five minutes the whole herd were kicking and hooking each other with all fury. My mother laughed and said, "See what comes of kicking when you are hit. Just so I've seen one cross word set a whole family by the ears some frosty morning." Afterward, if my brothers or myself were a little irritable, she would say, "Take care my children. Remember how the fight in the barn yard began. Never give back a kick for a hit, and you will save yourself and others a deal of trouble."

—*Columbian Magazine*.

HUSBAND. The etymology of this word may not be generally known. The head of a family is called husband from the fact that he is or ought to be the *band* which unites the house together—or the bond of union among the family. It is to be regretted that all husbands are not *house bands* in reality as well as in name.

It was Oliver Goldsmith that said, just in proportion as we find taverns in a country, we find the people ignorant, idle, vicious, and every thing on the decline.

A LITTLE PARAGRAPH WITH A BIG MORAL. "I can't find bread for my family," said a lazy fellow in company. "Nor I," replied an industrious miller: "I am obliged to work for it."

THE AGRICULTURIST.

Proposed Convention of Fruit Growers.

A Convention of Fruit Growers in Maine was held last year, which resulted in the formation of a Society. A similar convention for Vermont, to be held at Montpelier in October next, has been suggested.—Many good reasons may be urged in favor of the movement,—such as the following:—

1. There are many native fruits in Vermont, particularly apples, of great excellence, and which, as adapted to our soil and climate, ought to be generally known. In some cases valuable varieties have already been lost,—having perished with the original tree.—In others, they are known but to a cultivator or two, or within a very small circle. To collect these and ascertain their real merits would be of immense advantage to the State, and it can be done within a reasonable time only by the labors of an active society.

2. Many kinds are propagated among us which do not deserve the place they hold. They happen, perhaps, to be among the best in an ill-supplied neighborhood, and are consequently propagated there, and recommended and tried elsewhere, with no small loss and disappointment in the end. They prove to be not of the best quality, or poor bearers, or slow in coming into bearing, or in some other way fatally deficient as candidates for general cultivation. An attention to the culture of fruit is increasing, there is danger that errors of this kind will multiply.

3. Fruit from abroad cannot be depended on as adapted to our use, without trial. An apple that surpasses all others in New York and New Jersey, may not succeed at all in Massachusetts. Favorite fruits in Massachusetts and Connecticut cannot be relied on as certainly good for our soil and climate. New York apples that are rejected about Boston, may prove excellent with us. But as yet adequate trial has been made of comparatively few fruits of foreign origin; and in regard to those which have been proved, the knowledge of the result is limited. An apple that has been tried and rejected in one town, may be eagerly sought for and tried again in the next, to be again rejected. A society, bringing together and publishing the results of experiment in all parts of the State, would do much to guard us against mistakes and losses from this source.

4. As many farmers will be planting young orchards within a few years, it is of immense importance that they do it intelligently,—that the selection of fruit be good; by which we mean not merely that the fruit itself be of good quality, but that it be such as to command a good price in market, and that the trees be hardy, vigorous, and prolific, and come soon into bearing. For instance, the Blue Pearmain is a handsome and excellent apple and sold last fall in Boston for 25 cents per barrel more than the Baldwin. But it does not bear young, nor abundantly. A cultivator thinks that taking the two from the nursery and giving them the same advantages, the Baldwin may be made to yield fruit worth \$100 before the Blue Pearmain will produce \$10. The St. Michael Pear

(Virgalieu) fails and is rejected of late about Boston, but in most parts of New York it is of "nearly unequalled excellence." It has been cultivated with perfect success in this county for many years. We cannot depend on information from other States without more or less danger of disappointment. A State society, by bringing cultivators together, and rendering the experience of each available for all, might do incalculable good.

This subject is of the more importance on account of the near prospect of a more profitable market for all our surplus fruit. It may be sent by railroads, and find its way to Europe. And in regard to the market abroad we have this in our favor,—that fruit grown in Vermont will keep better than the same kinds ripened in warmer regions.

We hope therefore that measures will be taken without delay to watch over and promote, by united action, the fruit-growing interests of the State. Our vote is in favor of a meeting; and we do not know who could call it with more propriety than our friends in Burlington, who, so far as we know, have formed the only Association of the kind in Vermont.

To prevent Smut in Wheat.

The smut and burned ear, a fungus growing on Wheat, called by Botanists, *Uredo carbo*, may generally be prevented by a proper preparation of the seed before it is sown. Many corrosive substances have been recommended for steeping, such as blue vitriol, arsenic, &c. It seems, however, that if care be used in the selection and sorting of the seed, washing it well in rain water, or salt and water, and afterwards drying it with quicklime, effectually prevents the germ of the smut. The following is the method adopted by Gen. Harmon, of Western New York, one of the most successful wheat growers in the Northern States. All small or imperfect kernels are sifted out, and nothing but the matured seed sown. Twenty-four hours before the wheat is sown, it should be washed in a brine as strong as salt will make it. After draining a few minutes, mix with each bushel two quarts of newly slacked lime, and sow one and a quarter bushels to the acre.

Gen. Harmon further remarks: "The above is my course of operation. My average crop for several years has been even 28 bushels per acre, of very superior quality, mostly used for seed. My price has uniformly been twenty-five cents over the millers."

J. R. C.

The above begins with language learned enough to frighten one who has a prejudice against *Book Farming*. But we here put it into our *Book* as a very practical matter, that turns out the dollars and cents. Here an intelligent and extensive wheat-grower, who has for years had an average crop of 28 bushels to the acre in a State where the general average is but 16 bushels, and who sells it for 25 cts. a bushel more than his neighbors,—gives us some items of the management that secures his success,—that enables him to realize—when the common price of wheat is one dollar—thirty-five dollars from an acre, while his less skillful and careful neighbor gets only sixteen dollars.

And this is put in *the Book* in order that such as please may avail themselves of Gen. H's experience, to secure the like results. Many of our farmers are in the habit of using brine,—some, both the brine and the lime;—but the other very important particular—the sifting out of the imperfect kernels—is too generally neglected.—*EDS. VT. AGRICULTURIST.*

A Pleasant Letter from an Agent.

MONKTON, 6 mo. 23, 1847.

To the Editors of the School Journal and Vermont Agriculturist:

The first number of the Journal was handed to me a few days since by the agent for Addison county. I had long desired to see something of the kind in circulation, but had hardly dared to expect to see my hopes so fully realized. To use a homely phrase,—it seems to come to us like the lost wheel of the great car of general improvement.

I am of those who believe in the old doctrine that "mind acts powerfully upon mind," and that nothing among human agencies contributes more to the true elevation of the human family, than, under proper regulation, the frequent interchange of sentiment between the members of that family. Thanks to the printing press, and thanks to the originators of your (as a reader, I am strongly tempted to say *our*) Journal, for the facilities it will afford of exchanging sentiments between those who are *practical and experienced* in the two great concerns—the *right management* of the School, and the *right management* of the Farm.

After sunset, on the same evening that I received the Journal, I commenced a tour of exploration, and discovered among the three pedestrians that I met, and in each of the four houses that I entered, a subscriber, in whose families I have no doubt the Journal will be cheerfully and attentively read. I have since then met with others, and expect before long to make up a respectable list. (I have now about twenty-five on my list, and the town not half gone over.) In some cases I have found, as might be expected, that some labor was required to induce the person addressed to believe that the Journal was not got up for a "catch-penny," or to serve some "sectarian or party purposes," but on the contrary "that the publication was commenced," as you say, "at the suggestion and in compliance with the wishes of gentlemen interested in education and in all efforts to advance the prosperity of the State." Yours respectfully,

HENRY MILES.

Butter Making.

Science has been directed to the analysis of milk, and principles having an important bearing on the success of this pursuit have been developed. Thus Dr. Playfair says, respecting a series of experiments, that the milk of the evening contained 3.7 per cent. of butter, and of the following morning 5.6 per cent. The deficiency in the first observation is referred to a greater consumption of butter, or its constituents, from respiratory oxidation during the day, when the animal

was in the field, than during the night, when it was at rest in the stall. When confined during the day, and fed with after grass in a shed, the proportion of butter rose to 5.1 per cent. When fed with hay, the butter was 3.9 and 4.6 per cent.; when fed with portions of potatoes, hay, and bran flour, the butter was 6.7 and 4.9 per cent.; when fed with hay and potatoes, 4.6 and 4.9 per cent.

From the account of the experiments of Professor Trail, contained in the Transactions of the Highland Agricultural Society, are derived the following results:

"1. That the addition of some cold water facilitates the process, or the separation of butter, especially when the cream is thick and the weather hot.

"2. That cream alone is more easily churned than a mixture of cream and milk.

"3. That butter produced from sweet cream has the finest flavor when fresh, and appears to keep longest without acquiring rancidity; but the buttermilk so obtained is poor, and small in quantity.

"4. That the scalding of the cream, according to the Devonshire method, yields the largest quantity of butter, which, if intended for immediate use, is agreeable to the palate and ready saleable; but if intended to be salted, is most liable to acquire, by keeping, a rancid flavor. The process of scalding is troublesome, and the milk after the removal of the cream is poor, and often would be unsaleable, from the taste it has acquired from the heating.

"5. That churning the milk and cream together, after they have become slightly acid, seems to be the most economical process, on the whole, because it yields a large quantity of excellent butter, and the buttermilk of good quality.

"6. That the keeping of butter in a sound state appears to depend on its being obtained as free from uncombined albumen or casein and water as it can be, by means of washing and working the butter when taken from the churn."

Marl.—Answer to "S. E."

MIDDLEBURY, June 28, 1847.

MESSRS. EDITORS:—Your inquiry respecting "blue marl" is received. [Vermont Agriculturist for June, p. 27.] If, as I cannot doubt, it is the calciferous blue clay found in Orange Co. and elsewhere, it will be more useful on sandy soils, where it will be both a corrective and a fertilizer. It can do no harm on a clayey soil, and if the latter is deficient in lime, it may be valuable.

Any method of using it, which incorporates it with the soil, is a good one. See 1st Geological Report, pp. 50, 51.

Yours, &c.,

C. B. ADAMS.

Editors Agriculturist.

The passage of the Report referred to by Professor Adams is as follows:—

"Marl is a pulverulent carbonate of lime, more or less mixed with clay, and often resulting from the disintegration of myriads of small shells, which, in the lapse of ages, have accumulated in deposits many feet

in thickness. The name has sometimes been extended to other pulverulent deposits.

"Owing to the fineness of the particles, marl may be used in the same manner as lime for agricultural purposes. Supposing, as in the case of lime, it has been ascertained that it is wanted in a given soil, the quantity required will of course depend on the quantity of clay in the marl. It is obvious also that marls abounding with clay will be more beneficial to light than to stiff soils, since it will serve both as a corrective and fertilizer. Much of the brown clay west of the Green Mountains is more or less marly, and may therefore be applied with the greater advantage to sandy soils. On the other hand, many beds of marl are nearly pure carbonate of lime, and equally useful for clayey soils, which are deficient in lime.

"The northern part of the State has been found, by Messrs. Thompson and Hall, to abound in marlbeds, which are destined to be a source of wealth to the farming interest for ages to come."

[Mr. Hall, while engaged in the survey, remarked to us that, in the elements of permanent productiveness, the Western prairies are poor in comparison with extensive regions in Vermont.—EDS.]

Wool Depots and Sheep.

In the July number of the Cultivator for 1845, I called the attention of wool-growers to the Depot, then about being established for the sale of wool, by H. Blanchard, at Kinderhook, which at that time was a matter of experiment, and nothing practical to commend it to the notice of those concerned; but now, after a trial of two years, I feel justified in recommending it to the patronage of all who have wool to sell,—as a successful and beneficial operation; because I have been satisfied with the sale of my wool; because it has given general satisfaction; and because it has been admitted by all with whom I have conversed on the subject, that the wool in this section has been sold higher than it would have been had there been no depot. My wool has sold for the last two years, for more per pound at the depot, than it did for the three years previous, notwithstanding the market price has been from eight to ten cents lower.—Wool at the depot is sold upon its merits, and brings all the manufacturer is willing to pay; because the agent knows its value, and understands the market as well as the buyer. Not so with the grower; he has no means of knowing its exact value; because he does not know how it will compare with the different sorts of the manufacturer. No two lots of wool will sort alike, and a man that is not conversant with the business, and has not had practice, is altogether incompetent to do it; and if he cannot assort wool well, and does not know the prices of the different sorts, he cannot be a close judge of its value; hence he is liable to be cheated, because the buyer knows its exact value, and when he has no competitor will seldom pay it. If he is a speculator, he buys low to make money; if an agent, to suit his employer. Another reason why wool-growers in this section should patronize the depot, is because there has been no competition for many years to any considerable extent;

as one man has been the principal buyer in Columbia and Renssellaer counties in this State, and Berkshire in Massachusetts, and before the depot was established, if we did not sell to him we could not sell at all; why this is I know not; but wool-growers generally believed there was a combination or understanding among the buyers, that each one should buy within an allotted territory, and that belief was one of the principal causes which led to the establishment of the depot.

While writing, I wish to say a few words on the importance of greater improvements in flocks. I suppose two-thirds of the flocks in this section that do not have particular attention, do not, at the present low prices, produce more than about one dollar's worth of wool per head. Now I suppose with a trifling expense for better bucks, and with a little attention to the selection of the most unprofitable sheep, (which should be sold or killed,) any such flock in a short time, may be so improved as to enhance the value of the fleece twenty-five cents apiece, and in a short time more, another twenty-five cents may be added.

All we add to the value of the fleece, is profit, as a sheep that yields but two and one-half pounds, requires as much feed and more care than one that yields three and one-half pounds.

I have had the same stock of sheep for twenty years, and have improved them till they have averaged me, for the last five years, from three pounds five to three pounds nine ounces per head, which sold at the depot for forty-four cents per pound, and the fifty cents per head I got more than the owner of an ordinary flock, comes of improvement.

DANIEL S. CURTIS.

Canaan Centre, June 14, 1847.—Cultivator.

NOTE. The profit comes after paying expenses. If your wool costs you 75 cents a head on your 100 sheep, and you sell it at \$1 a head, although you get two-thirds as much money you have only one-third as much profit, as the same number of sheep would give you when improved like Mr. Curtis's flock; in other words you would, in the latter case, have \$3 to put into your pocket for every \$1 that that you now get. Let the farmer's boys use their arithmetic in the application of this principle to all farm products.—EDS. VT. AGRICULTURIST.

IMPROVED CATTLE IN VERMONT. Mr. J. W. Howes of Montpelier, has recently purchased of E. P. Prentice, Esq., (near Albany) a very superior Ayrshire bull. The Ayrshires are the pride of Scotland.—Messrs. M. & A. L. Bingham of Cornwall have purchased of W. H. Sotham, seven Hereford cattle, three cows, three bulls, and a bull calf. The Hereford's are expected to find a congenial region along the Lake.

LONGEVITY. Haller, who collected a great number of examples of longevity, found more than 1000 who had lived from 100 to 110; 60 from 110 to 120; 20 from 120 to 130; 15 from 130 to 140; 6 from 140 to 160—and 1 who lived to the remarkable age of 196 years.

Read—Think—Select.

When a writer lays down a code of rules for the regulations of a farm in Massachusetts, he does not expect that they will be adopted by a farmer in Georgia. When the culture of the potato has proved successful under directions given by you for a cold clay soil, the farmer must not feel disappointed, if he fails of success by following the same direction in a light sand or loam. Rye requires a different preparation of soil in the North, from what it does in the West; and so it is with every variety of vegetation to which our attention is directed. Vegetation in different climates require different treatment. Varieties in soil require different kinds of culture to prepare it for the reception of the same article.

Farmers must use their own judgement in approving or practising the rules and directions which they find laid down in the pages of their agricultural papers. Some of them are valuable to farmers in one locality, others, to those in another region. If you meet with an article of no practical value to you, do not censure the editor for its publication. In the wide range of the circulation of his sheet, he has some readers to whom his instructions given in that article may prove invaluable. I have known the publication of a simple receipt, in an agricultural journal, to be the means of saving the life of a valuable horse. To the reader who did not own an animal of this description, its publication was of little value; but to the farmer in question it was truly valuable, and proved a saving to him of a larger amount than the yearly subscription of his paper for half a century. "Read, pause and reflect," is your duty, and "choose that which is good," your privilege. Adopting this rule you will realize much truly valuable instruction from the pages of any well conducted agricultural journal.—*Boston Cultivator*.

THE EFFICACY OF SALT AS A MANURE.—WHEAT—A HEAVY CROP. A Mr. S. M. Brown, of Elbridge, Onondaga Co. New York, harvested, the year 1846, upwards of 400 bushels of fine flint wheat, (the most approved variety) from 8 acres. This is doing well, being, as our readers will perceive, more than fifty bushels to the acre. This wonderful yield is ascribed, in great part by the proprietor, to the salutary effects produced by SALT—an application of which, to the amount of three bushels to the statute acre, was made before sowing the grain. We have long been fully aware that no substance can be more decidedly and obviously effectual in its application to soils infested by slugs and worms, than common salt. Highly as we appreciate lime we yet regard it as inferior to salt, and we have no doubt that were it more frequently used, our field crops, both as regards quantity and quality, would be appreciably increased. The idea, not long since promulgated in some of our Agricultural papers, that salt, in order to prove efficacious in expelling worms, &c., from the soil, must be applied in sufficient quantity to kill them, is of a piece with numberless other theories of the day. When worms or other depredators detect an ungenial or noxious principle in the soil, they at once forsake it; the warn-

ings of instinct being sufficient, without the agency of death in the matter, to effect their expulsion.—*Olive Branch*.

BREAK THE CRUST. Every observant farmer must have observed the crust which forms on the surface of newly stirred soils, after lying a few days to the action of the dews. A much heavier crust is formed by each shower of rain which falls. Good and successful cultivation requires that this crust be often and repeatedly broken by the hoe, harrow, or other instruments.

A striking instance in proof of the importance of this practice has just been stated by an extensive farmer. He planted a field of broom corn, and by way of banter told the man who assisted him, that each should choose a row as nearly alike as possible, and each should hoe his row, and the measured amount of crop on each should be the proof which was hoed best.—Our informant stated the result in substance as follows:—'Determined not to be beaten, I hoed my row once a week, the summer through. I had not seen my assistant hoe his at all; but had observed that for a long time he was up in the morning before me. At length I found him before sunrise, hoeing his broom corn, and I asked him how often he hoed it;—he answered, 'Once a day, regularly.' The result of the experiment was, *his row beat mine by nearly double the amount.*'

HENS AND CHICKENS. As the season for rearing Chickens is at hand, I beg leave as a professed utilitarian, to give to your readers a hint of a plan which I have successfully practised for several years, for economizing the time of my hens, because, in this as in other instances "time is money"—or rather time is eggs, and eggs is money.

When I have a number of setting hens in process of incubation, the first one that comes off with her chickens, I put in a coop, just as other people do; when the second one comes off, if a day or two has intervened, and I were to put the last hatched chickens to the first hen, which has now had time to become acquainted with the number and color of her own brood, she will abuse and kill the new comers as intruders, especially if they are of a color different from her own;—instead of this I remove the first hen and put the second in her place with the chickens of both—when the third comes off, I put her in the place of the second—and give her all the chickens, and so on, until the last hen has as many as she can attend to, a large hen comfortably broods 25 or 30 chickens—and the hens which have been taken from the chickens, after a few days will resume laying again, instead of wasting their time with the care of a few chickens. I have known an instance where one hen has raised 38 chickens to maturity.

AGRICULTURE. "Agriculture," says Socrates, "is an employment the most worthy the application of man, the most ancient and the most suitable to his nature; it is the common cause of all persons, in every age and condition of life; it is the source of health, strength, plenty and riches; and of a thousand sober delights and honest pleasures. It is the mistress and

school of sobriety, temperance, justice, religion and in short of all virtues, civil and military."

Pruning Young Trees.

As the time will soon be here when many commence to mutilate their orchards and nurseries, it may not be inappropriate to make some remarks on the best manner of, and time for, performing this important operation.

Trees of two years' growth—and here let me remark that if trees of proper form, not too high, and sufficiently thick near the earth to sustain their height, were more in demand, interest, if no higher motive, would soon prompt nursery men to furnish such, instead of the swiches now offered—are preferable.—These, if properly grown, will require, when transplanted, no stakes to destroy their bark, retard their growth and circulation of sap, but may be fastened by raising around their base a hillock of earth six or nine inches high.

Discrimination and judgment now become necessary, because the stalk increases in thickness only as the number of branches and leaves increase; therefore, permit all new shoots to grow one year, at least enough to keep up a due proportion between thickness and height. The ascending sap undergoes changes in the leaves, and only then returns as proper juice to deposit a layer of wood. After the first year's growth, we may occasionally remove or shorten some of the largest branches—permitting young shoots to grow—about midsummer, or at any time while full of leaves; because then the descending proper juice will soonest repair the injury. The reason for removing some, and permitting other shoots to grow, is obvious. If removed before attaining to large size, the injury to repair will be less and sooner accomplished. After the trunk has size and strength to sustain a good top without growing crooked, at what height should be the first branches? When ploughing and thorough cultivation are to be performed (and in orchard culture they always should) seven feet from the ground is quite low enough. Some prefer eight or nine. There is a difference too, in the growth of trees. The yellow Bell-flour and Smoke-house, both well adapted to—and the latter originating in—this State, require to be trimmed high.

How long, some one asks, will it require to do all this; and will not early bearing be thereby retarded? There are trees in this neighborhood of eight years' growth—five from the nursery and three when procured—which are twelve and a half inches in circumference one foot from the ground, and nine at the first limb, six and three quarters feet from the ground, perfectly straight, which have never borne fruit, it is true; but is it not preferable to have trees grow rapidly while young—which is always antagonistic to the production of fruit buds—and form fine large herds that will eventually bear a greater quantity and finer fruit? After the head is properly grown, large branches should never be removed, and if properly attended to annually, it will never be necessary. It will facilitate reparation if some water-proof composition be applied when branches are removed. Tar and brickdust,

(Thomas,) gum shellac dissolved in alcohol, (Downing,) or equal parts of lard, tallow and beeswax melted together and stirred while cooling, will answer very well.—*Farmer's Cabinet.*

THE POOR SHEPHERD BOY. The Rev. John Brown, when a poor shepherd boy, conceived the idea of learning Latin and Greek, and having procured a few old books, actually accomplished the task, while tending his cattle on the hills. So successful was he that some of the old and superstitious people in the neighborhood concluded that he must have been assisted by the "evil spirit." On one occasion he went to Edinburgh, plaided and barefoot, walked into a bookseller's store, and asked for a Greek Testament. "What are you going to do with a Greek Testament!" said the bookseller. "Read it," was the prompt reply. "Read it!" exclaimed the skeptical bookseller, with a smile, "ye may have it for nothing if ye'll read it." Taking the book, he quietly read off a few verses, and gave the translation; on which he was permitted to carry off the Greek Testament in triumph.—*Turnbull's "Genius of Scotland."*

PLANTING FRUIT TREES. A writer in the Cultivator very aptly compares the practice of planting trees from a rich nursery into poorer land, to taking a horse from being well fed on oats and giving him straw rations. Twenty years experience convinces him that fresh hog manure is best, particularly for pears, to be mixed well with the soil, as far as the roots extend. Every year or two a top-dressing should be ploughed or spaded in.

BLANDY'S WASH FOR FRUIT TREES. Take three gallons of lye from wood ashes, strong enough to just float an egg; one pint soft soap; one quarter pound of nitre, (salt petre;) one handful of common salt. The nitre should be dissolved in warm water, then add the other ingredients, and stir till thoroughly incorporated. Apply it to the trunks and large branches of the trees with a common painter's brush. [If applied to very young branches, or the leaves, the wash may prove injuries, owing to the strength of the lye.]

CHARCOAL. Pounded charcoal, or the refuse of the heap, should be thickly strewed over every place where filth is allowed to accumulate. It absorbs the bad smell, and makes an excellent manure of what otherwise would not only be useless but offensive. It also prevents the larvæ of insects from becoming flies or moths. Pigs like to eat charcoal, and are thought to fatten on it; and in the course of the summer months, I frequently have a bushel or so at a time thrown over the pen. It makes the manure so much more valuable that I find it worth while to buy it for the purpose; and in so doing the pens are never offensive.—*Am. Agriculturist.*

There are 79 kinds of vegetables on which swine will feed; 171 kinds they will not touch. A horse will feed on 262 kinds of grass and reject 242. A cow will feed on 276 kinds and reject 126.

Caps for Hay.

Ma. HOLMES:—It was an old adage "in peace prepare for war;" but I say, in winter prepare for summer, so I proceed. A year ago last summer I used hay caps, that is, pieces of cloth about five feet square, with a stick some eighteen inches long fastened to each corner, and spread one over every cock of hay, and the sticks inserted in the hay, which prevented the wind from blowing them off. This I did every night, and did not allow even the dew to blacken my hay. When the weather looked bad I put up my hay, sometimes when it was hardly wilted; and had it stand at one time, seven or eight days with almost incessant foul weather, and when I opened it, the hay was completely cured to the very top. All that was injured was a little near the ground and this so little, that the hay in winter, was pronounced, by good judges, first rate. All my neighbors' hay that was out was literally spoiled, for none wore caps. I have no doubt but in that single storm fifty tons of hay were spoiled in the town of Sangerville, which would have commanded eight dollars per ton. Yes, four hundred dollars in the little town of Sangerville! Now, how many caps would that have purchased? Let us see.

Thirty inch cotton cloth, which is sufficient, at 7 cents per yard, would cost, say twenty-four cents, (three yards and a foot would make a cap) so that four hundred dollars would procure cloth for sixteen hundred and sixty-six, allowing almost a cent as a fraction on each cap. Now fifteen caps of that size are sufficient to protect a ton of hay, so that sixteen hundred and sixty-six caps would protect one hundred and eleven tons of hay. Yes, the bare loss above mentioned, would have procured caps enough to have secured eight hundred and eighty-eight dollars' worth of hay. Perhaps you will say I did wrong in reckoning the *total* loss of the hay; but several told me that the time spent in good weather, in drying and securing the damaged hay, was more than it was worth: it put them back in making their other, which, we all know, ripens fast after a long storm, so that the actual damage to the latter hay, was more than the damaged hay was worth. My hay is so free from dust that a person afflicted with the asthma would hardly suspect the presence of dust in handling it. I swapped horses last winter, and took a horse that was supposed to be rather used up with the heaves; put him on my clean hay and he soon began to amend, and although I have kept him to the hay as much as he would eat, he is as free from any appearance of heaves as he ever was, and stands fast driving, with as little puffing, as well as any horse that I ever drove. I am full in the belief, with some of the English writers, that bad hay is generally the cause of heaves in horses.

J. L.

Sangerville, Jan., 1847.

—Maine Farmer.

SEEDLING PLANTS AND VEGETABLES Agricultural Societies, if guided by reflection, instead of precedent, would offer to those who by persevering experiment establish new and valuable varieties of fruits and vegetables, ten times as much as they now

offer for sleek stallions and pampered geldings, and heavy crops from patches of corn.

A new variety of the potato, for example, is generally considered to continue in perfection not more than 14 years. Fresh varieties must therefore be raised—and how few will take the trouble to do it! He who does, and succeeds in supplying the place of a declining peach, or apple, or potato, is a *real* benefactor of his country, and deserves higher reward than the inventor of a new shell for dealing death and destruction to the human race, which, by-the-by, rarely falls upon the real authors of the mischief that plunges nations into war.—*Journal of Agriculture.*

Prospects of the Harvest in England.

GENERAL AGRICULTURAL REPORT FOR THE MONTH OF MAY. Taken as a whole, the weather experienced during the past month has been exceedingly fine and vegetative; hence the progress of the growing crops has been both rapid and gratifying. Its rapidity will be best inferred when we state that, in many of our forward districts, wheat and barley are rapidly coming into ear; and the gratification is deduced from the fact that the harvest work, under the present auspices, is likely to be commenced quite as early as the corresponding period in 1846; consequently, the wants of the consuming classes are likely to be met with home-grown produce somewhat earlier in the season than was anticipated a month or six weeks ago; the necessity for unusually large importations of foreign corn after the close of July will be rendered unnecessary; and further, that the prices of most articles are likely to assume a more moderate range than we have had to note for some months past. These opinions are of course, offered in the expectation that the forthcoming crops, not only of corn, but likewise of potatoes, will be good ones. Should a reverse state of things be experienced, of course it would be out of the question to expect a low, or even a moderate range of value.

With scarcely a single exception, the accounts which have reached us from all parts of England respecting the general appearance of the wheats, barleys, or other produce, are very flattering. As to the ravages committed by the wire-worm and other insects, we may state generally that they have been to a very trifling extent; and our correspondents, one and all, speak in the highest terms of the present aspect of the fields.

Notwithstanding the severe losses which most of the potato-growers suffered last year from the long-continued disease in that esculent, and the very high prices at which it has been selling in our various markets during the whole of the present year, we have every reason to believe that a fair average quantity of land is under potato culture this season, not only in England, but also in Ireland and Scotland.—It would of course, be premature on our part to offer any positive opinion as to the growth this year; but the result of the inquiries we have caused to be made lead us to hope that the disease is presenting itself in a very mitigated form compared with that of the two preceding years.

The fine rains, aided by warm sunshine, have had a most beneficial influence upon the grass crop, which promises to be a most abundant one. This, together with the fact that the growth of hay last year, as well as in 1845, was very large, and as the supplies now on hand are very extensive, the time of year considered, has had a very depressing influence on demand and value in the metropolitan as well as the large provincial markets, with every prospect, should the weather continue fine, of lower prices.—*Mark-Lane Express.*

Normal School and Teachers' Institute.

MESSES. EDITORS.—The friends of education will doubtless be glad to learn, that a Normal School and Teachers' Institute is to be established in this county, the ensuing autumn. From the experience of the last two years in examining teachers and visiting schools, I am convinced that a school is needed among us for the special purpose of affording teachers the necessary facilities for a more thorough training for their office than most of them have had. The experiment of Teachers' Institutes held for a short time—four of which we have had in the county of Windham—has also satisfied me that much can be accomplished even in a short time, where the attention of the whole school is directed to the same thing, at the same time and confined to a few branches of study. I have been erecting a house in a retired and attractive spot near my own residence, which will be fitted up with every convenience that I can command for the purpose of a Normal School and Teachers' Institute. And my plan is to have a school for two terms in a year of ten weeks each, one commencing the first Monday in September, the other the first Monday in March. The course of study, instruction and lectures will be specially adapted to the wants of those who propose to engage as teachers in district schools; and still not unsuited to any who wish to pursue the prescribed course.

Particular attention will be paid to Reading, Spelling, English Grammar, Geography, and Arithmetic, and instructions given as to the most approved modes of teaching them. Physiology, the History of the U. States, Drawing, Algebra, Book-keeping, and the structure and operations of the National and State Governments of the United States, will receive a due share of attention. Two lectures a week will be delivered on subjects important for teachers to understand, and instructions given from day to day designed to prepare them for the successful discharge of their duties. Opportunity will be given to the pupils of the Institute to visit the schools of our village, which are conducted in an approved and successful manner. As I propose to limit the number of pupils of the Institute to as many as I can attend to personally, those who intend to enter at the Fall Term, would do well to apply as early as the middle of August next. I prefer that none should attend the school except for the whole term, as the course of studies will be laid out for a term, and will not be varied to suit any who may wish to enter after the term has commenced.—The tuition for the term will be five dollars, without extra charges. Free access will be given to impor-

tant works on education, and every thing in my power done to make the school profitable to the young men and women who may attend it.

ADDISON BROWN.

Brattleboro', June 25, 1847.

TO CORRESPONDENTS. Several communications are on hand, which we are sorry to defer; but they came too late for their proper place in the present number.

Back numbers can still be supplied.

WANTED, in those towns in which nothing has been done for the circulation of this paper, some active man friendly to improvement, just to ask the people for their subscription of 25 cents each.

The Markets.

The change in the price of *bread-stuffs* since our last has been remarkable. The decline which had then commenced still continues; and Genesee flour, common brands, is now sold in Boston for \$6, and Ohio and Michigan at \$5 50 to \$5 87. Northern Corn, 85 cents.

This decline results from the abundant supply, present and prospective. The wants of Europe are to a great extent supplied, and large quantities of grain from some of the Northern ports, that are closed till very late by ice (Riga, for instance,) were at hand at our latest dates. Intelligence from all parts of Europe represents the crops as in a most promising condition. In Egypt an abundant harvest had already been gathered; and everywhere the season, though late, had been remarkably propitious.—In our own country there are still immense supplies that have not reached the Atlantic ports. The wheat harvest has already commenced as far north as Ohio, and proves excellent where it has been gathered, while there is promise of abundance in the more northerly districts. The season, although backward in the early part of it, has proved remarkably favorable; and there is every prospect of abundant crops of all kinds.

In *provisions*, on the other hand, there has been no change of importance, and prices continue comparatively high.

WOOL. The quotations of the Boston Prices Current are unaltered. Some of them argue from the prospects of trade, that manufacturers will not probably continue to pay present prices,—which are too high for export.

Prime Saxony Fleeces,			
washed,	lb.	45	a 50
American full blood	"	40	a 45
" 3-4	"	35	a 39
" 1-2	"	31	a 33
" 1-4 and com."	"	27	a 30

The Boston quotations a year ago were as follows:

Prime Saxony Fleeces,		38	a 40
American Full Blood,		35	a 37
" 3-4		30	a 32
" 1-2		28	a 30
" 1-4 and common,		26	a 28

GOLD MINES IN RUSSIA. The produce of the gold mines in Russia is yearly increasing. In 1841, the quantity extracted from those mines was 961 pounds, (9610 kilogrammes,) amounting in value to 39,000,000 fr.; in 1842, 9810 kilogrammes, value 52,800,000 fr.; in 1843, 12,950 kilogrammes, value 72,800,000 fr.; in 1844, 13,410 kilogrammes, value 76,000,000 fr.; in 1845, 13,711 kilogrammes, value 79,600,000 fr.; making in the five years a total weight of 59,490 kilogrammes, of the value of 319,600,000 fr. Up to the present time, almost all the produce of the gold mines of Russia has been exported to England; but if the quantity continue to increase progressively, or if it even longer exceed the quantity obtained in 1845, England will cease to receive it, at least, the greater part, and then it will be necessary for her to seek other markets for her gold, which it may perhaps be rather difficult to find; but let us hope that the new system of commercial policy which the government has adopted, and particularly the reduction of the import duties, which has been the first consequence of it, will increase our consumption of foreign merchandise, in the purchase of which our gold may find an advantageous employment. However this may be, the working of the gold mines in Russia must necessarily cause, sooner or later, a great revolution in the commerce and industry, not only of Russia, but of all the points of the globe.—*Patent Journal.*

ARABIAN MODE OF TREATING HORSES. However poor, an Arab is never without a good horse; and he will often take pleasure in looking at it for an hour together. The horse is washed, but never curried. As soon as a colt is a year old his mane and tail are shaved, to make the hair grow again as thickly as possible.

Domestic Economy.

SHRINKING AND SWELLING OF MEAT IN THE POT. When children, we used to be told that pork, beef, &c., killed in the *old* of the moon, would *shrink* in the pot; and if in the *new*, that it would *swell*; and a great many good honest farmers religiously observed the waxing and waning quarters for their periodical packing. That some meats shrink, while others swell, is a fact too notorious for cavil; but that the moon is to be praised or blamed for this agency, we most fully deny. The true causes of these changes is found in the manner of feeding animals before slaughtering. An animal that has been long and well fed, until the fat has become fully charged with solid matter, will, on exposure to boiling water, absorb a portion of it, and consequently swell the dimensions of the flesh; while that which has been hastily, or but partially fattened, will diminish in cooking from the abstractions of the juices which occupied the cavities or spaces between the lean fibres. This is the *whole secret of the shrinking and swelling of meats*. It will thus be perceived that one carcase of equal weight may differ materially in value from another of nearly the same apparent quality. Eggs from well fed hens are also much more rich and substantial than those produced by hens sparingly fed. The latter will invari-

able be found meagre and watery.—*Am. Agriculturist.*

DELICIOUS APPLE PUDDING. Very convenient, as it may be made several hours before it is baked, or when a nice addition is wanted unexpectedly. Pare and chop fine half a dozen or more, according to their size, of the best cooking apples; grease a pudding dish, cover the bottom and sides half an inch thick with grated bread, and very small lumps of butter, then put a layer of apples with sugar and nutmeg, and repeat the layer, which must be of bread and butter; pour over the whole a teacup of cold water. Put it into the oven as soon as the dinner is served, and bake it for twenty-five or thirty minutes. It may be baked the day before it is wanted; when it must be heated thoroughly, turned into a shallow dish and sprinkled with powdered sugar. It requires no sauce.—*Id.*

AN EXCELLENT AND CHEAP PUDDING. One pint of rice; twelve apples of good size and sour; pare, core, and slice them; mix the rice and sliced apples, and put all into a bag and boil for half an hour. The bag must be large enough to allow the rice to swell, and yet no larger than the rice, when swelled, will fill. Eat with any sauce that suits the taste; butter and sugar are excellent.—*Id.*

SMOKED MUTTON. The Editor of the Tennessee Farmer declares his preference for the ovine over the bovine or the swinish race. He says on his knowledge of physiology, which none will dispute, that a pound of lean, tender mutton can be procured for half the cost of the same quantity of fat pork; and that it is infinitely healthier, in summer especially; and that those who feed on it become more muscular, and can do more work on it, with more ease to themselves. He knows of nothing more delicious than smoked mutton hams. We can readily believe it all; still we should prefer a ham of commodore BALLARD's curing at Bellefield, for our eating! especially if eaten, as canvas-backs only can be in real perfection, on the spot where they are killed.

HOW TO TREAT LARD. The trying of lard is an important branch of economy, requiring a little care and some direct information. Water be it remembered, should never be made use of in this process, since it cooks the fat and makes it soft and liable to become speedily rancid. Put the lump fat in a pot, and stand the pot along side of the fire, gathering around it a few embers; let a little of the fat try out, after which, put the fat over the fire; with such precaution there is no danger of the lard's scorching, and no need of water, but the lard when fully cold, will be found quite firm and solid, which cannot be the case if water be made use of in the trying out.—*Scientific Am.*

TO DRESS RICE. A lady recommends the following:—Soak the rice in cold salt and water for seven hours; have ready a stewpan with boiling water, throw in the rice, and let it boil briskly for ten minutes; then put in a cullender, cover it up hot by the fire for a few minutes, and then serve. The grains are double the usual size, and quite distinct from each other.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. I.

WINDSOR, VT., AUGUST, 1847.

No. 4.

THE SCHOOL JOURNAL.

To the County and Town Superintendents in Vermont.

GENTLEMEN:—Will you allow one who has devoted very many of the best years of his life to the cause of education to address a few words to you on a subject which appears to him of exceeding importance, and which, if sufficient attention be immediately devoted to it, may produce, he fondly trusts, the most beneficial effects on our mutual labors?

I believe it will be generally acknowledged, by all who have taken an active part in the improvement of our schools, that the chief impediment lies in the apathy, if not actual hostility of the parents. There is no difficulty in convincing the teachers that one course is right, and another is wrong. But to reach the parents, without whose consent and cooperation no important change can be brought about, here lies the grand difficulty! Now what is the cause of this extraordinary state of feeling? Are our community really insensible to the advantages of a sound education? Are they actually opposed to the welfare of their children? By no means. Only convinces them that the contemplated improvements are real, not imaginary; only show them that the effect of the new law, if carried out in its true spirit, will raise our whole people higher in the scale of creation, and you will at once convert these apathetic lookers-on, and these violent opposers, into active coöperators.

But how is this to be done! how shall we get access to the firesides of our thinly scattered population? By lectures! No. For unfortunately these fail to draw out any but the *friends* of the cause; its enemies too frequently keep themselves away. Here, then, seems to be the most difficult task. For, in fact, in addition to the apathy or hostility of the mass, the labors of the farmers and mechanics by day naturally disincite them from resorting to the lecture-room at night, especially where there is a total want of *faith* in the advantages thence resulting.

Under these circumstances I hail the appearance of the *SCHOOL JOURNAL* as an exceedingly favorable omen. It promises, if sufficient pains be taken to give it extensive circulation, to offer us the very means of access to the mass which is so much to be desired.—The devotion of a portion of it to agriculture seems to me to have been a very happy thought. For it will, I have no doubt, introduce us into hundreds of families that we had no other means of reaching. And many, I fondly trust, who merely take it up with a

view to their improvement in pecuniary matters, will derive from it imperishable advantages of a far higher character.

But such important results as these are not to be realized without considerable effort on our part.—Every superintendent ought to consider himself personally interested in the matter. Pains should be taken to introduce the paper into every family in the State. To some, the extreme cheapness of the publication should be dilated on, and the advantages of a family paper at so low a rate. Others must be urged to subscribe by the necessity of keeping up with the mechanical and agricultural improvements of the day; while to the enlightened friend of education must be presented the more solid advantages of the measure, and the benefits that may arise to the whole community from this method of disseminating information that is so essential to the well-being of society.

In conclusion allow me to add, that something more than a mere momentary effort will be necessary to keep alive this valuable aid towards the improvement of education. There is a tendency in subscribers to papers that are not sustained by political excitement, to drop off at the end of the term for which they have subscribed. Let the month of April, then, for many years to come, be considered a period at which we all have an important duty to perform. Let us look to it that there is no falling off at the end of a volume.—Let every town superintendent take on himself the responsibility of seeing to this within his own jurisdiction, while each county officer gives a more general superintendence in his more extended sphere. Let all this be faithfully done, and let the Editors do their duty, which I see no reason to doubt will be the case, and the result to the State can hardly fail to be highly beneficial.

In the hope, gentlemen, that this address will be taken in good part, and as arising from an anxiety for the success of the good cause in which we are all engaged, and not from a desire to obtrude advice, I subscribe myself

Your well-wisher and fellow-laborer.

THOS. H. PALMER.

Pittsford, July 5, 1847.

For the School Journal.

A Word for Teachers.

Teachers, I have it in my heart to say a word to you; and I rejoice that a medium exists through which I can speak to you all at once—I mean our *SCHOOL JOURNAL*. You all read it, of course; for

you surely will not be persuaded to forego the benefit which such an auxiliary in your labors will afford you. And when we have a word for teachers, we like to feel assured the teachers will read it.

You are doing a *great work*; DO IT WELL. Your work contemplates the making of *men and women*; and valuable, *precious*, materials are committed to your hands to operate upon. Do not spoil them in making. Be careful not to *injure* them, for the injury will grow into the very texture, and tell a shameful tale of you when you are dead.

Your work is silent and unobtrusive, and you are unnoticed and unthought of, perhaps you will think. No, it is not so! Not your district only—the whole *State* think of you, and they have large expectations from your work, and they expect the *effect* will be seen and felt, for good or for evil, when the *cause* will be far remote and forgotten. You are retired, and feel not the restraints or the stimulants of public observation, and, on that very account, are in more danger of lowering, insensibly, the standard from the point where you fixed it the first day of your school. You started with the determination to *govern* your school and have *order*; but O! so many things go wrong in spite of all you can do,—the scholars, some of them are so given to mischief and others to heedlessness, and then these days are so long, and sultry, and wearisome, and you feel so much languor and head-ache, that possibly you are beginning to think you will try to *endure* what you have vainly tried to *cure*.

Now don't give up. Carry your point by perseverance. You *must* have order or your teaching is a failure, and all your hopes as a teacher will be disappointed. Your reputation is at stake; you never can be regarded as a successful teacher unless you succeed here. Feel that what ought to be done, can be done—yes, even in warm days. But take care, and do not, by over-earnestness, betray any want of confidence in yourself. Do not coax and flatter, nor scold and fret; but be calm, decided, and in earnest.

You are in danger of relaxing as you become familiar with the scholars, and the season advances, and the days become long and warm. Do you begin to allow what you at first prohibited, or indulge your scholars in their foolish notions and whims, because it costs less to indulge than deny them? Remember you are not doing work for the present term merely. Keep in view the future habits and characters of your scholars, and teach them subordination and submission to authority. Have you succeeded in breaking up *whispering*? if not, persevere and do it; it is "*evil and only evil continually*."

Another point where you are in danger of relaxing and letting down the standard, is in the daily recitations. You started with the determination to secure *good lessons*, and permit no scholar to advance till he had mastered the lesson for the day. That was a good resolution to start with, but you have found it required labor to carry it out. Some of the scholars do so hate study, and some "have the headache," or "don't feel very well," and "it is so warm," and "the lesson is so hard," they would feel very much

obliged if you would excuse them from getting it, and if not, seem determined to *excuse themselves*.—You could devise means for securing good lessons once or twice, or perhaps for a whole week, but to feel obliged to put forth your efforts in this direction every day from week to week, and find your expedients failing which had at first succeeded, and new ones tried till you feel at a loss what to do next, is discouraging, and you are *tempted now*, in the last half of your school, to get along easier and let the lesson pass, if not quite so well recited. But, take care! be faithful even unto the end. Try yet again; there are other expedients which will succeed, and you have invention enough to find them out, and can judge better than another what is best in the circumstances. Don't put down a lesson half-learned as "*perfect*." Keep the standard *high*, and let perfect mean perfect, and not something *approaching* to it.

Teach your scholars to rely on their own resources, and not feel that they must be *helped* in every difficulty. If they falter in recitation, do not be too ready to prompt them, but wait till they see and feel their own deficiencies, and the impropriety of calling such a lesson "*perfect*." Let them feel that if you prompt them on one-fourth of the answers the lesson was but three-fourths obtained.

Now, teachers, I know the temptations, and I say again, *don't relax*; keep yourselves and you scholars *up to the mark*. Increasing efforts are demanded to keep your school as good as it is; and it ought to be even better. These efforts must be *continually* put forth, if you would win and sustain the reputation of a *good teacher*, secure the hearty approbation of your employers, the lasting gratitude of your scholars, and what is better than either, the inward consciousness that you have acted under a sense of your solemn responsibilities, and faithfully discharged your duties.

C.

For the School Journal.

Multiplicity of School Districts.

NO. II.

Under this head I endeavored to show in a former number of the *Journal*, that were the interests of the schools in the State consulted, the number of school districts would be reduced to seven-tenths their present number. This great reduction of districts would reduce the amount of expenditures for schools; or should these remain the same, it would increase the amount of schooling to every scholar in the State.—This desirable change is to be effected by the people, if at all, for in them is vested the power to regulate school districts in their town meetings; and yet it is to be regretted that so little consideration should be manifested by the freemen at such times. Almost any measure of this nature is sustained, that those, whose interests are immediately concerned, may propose.

To remedy this evil tendency to multiplication, it has been proposed to enlighten the people upon the subject, that they may be enabled to act more judiciously. It is true that the people should be enlightened

upon this as well as upon all other subjects pertaining to the interests of common schools, and much is now being effected, by means of your School Journal and otherwise, to awaken an interest in schools and to disseminate correct notions in regard to them; but it is to be feared, that the reform effected by this method would be quite too slow to have much benefit derived from it. Nothing is more difficult than to convince the people that that is of general utility which they have been taught to believe is against their individual interests.

Again, the distribution of one-fourth part of our public money to districts as such, irrespective of their number of scholars, has a tendency to create or rather to encourage a desire on the part of small communities to be organized into districts by themselves. That there are beneficial tendencies in this mode of distribution is not to be denied; but while it aids feeble districts it has a direct tendency to encourage the spirit for increasing the number of those districts that need special aid, and deprives the larger districts of their just proportion of public money. To obviate these evils in some measure, and, at the same time retain the benefits arising from this law, it has been proposed that the selectmen be brought to a more strict responsibility; for if they did their duty and rigidly followed the requirements of the law, which demands that each district shall support a school two months in the year at its own expense, independent of public money, in order to entitle it to its distributive share of public money, the temptation to multiplication would be very much lessened. This may be true, and yet it is a common practice to take no sort of notice of this distinct and express condition. The apparent negligence of duty in this case on the part of selectmen is to some extent the result of necessity, for district clerks, from ignorance of duty or otherwise, make so imperfect returns that, should selectmen do their duty strictly, perhaps not one-third part of the districts in any town would receive a share of the public money. In this town (Cabot) probably not more than three districts could have received a share this year, had the law been strictly enforced. In this instance, the fault was generally not in the districts, but in the illegal time or manner of making the returns by the clerks.

The remedy that I would propose, is so to amend Sec. 32 of Chap. xviii, R. S., that it shall require the division of all the public money equally by the scholar in the same manner that the division of three-fourths of it is now made. This would effectually remove the evils arising from the multiplicity of districts, for it would deprive the feeble and unprofitable districts of that fostering care that has brought them into existence and sustained them. Such an amendment would also be in keeping with our republican institutions, as it would place all upon an equal footing, free from partiality or favoritism, and the larger districts, by receiving that money which is now squandered upon the small and unprofitable schools, would be able to improve the condition of their schools; and by extending their territory as they inevitably would, the advantage of good schools would be extended to all.

L.

CURE FOR A HEAVY HEART. The following method of "driving dull care away," was recommended by Howard, the celebrated philanthropist:

"Set about doing good to somebody. Put on your hat, and go visit the sick and the poor; inquire into their wants and minister to them. Seek out the desolate and oppressed, and tell them of the consolations of religion. I have often tried this medicine, and always find it the best antidote for a heavy heart."

Three cheers for that, Mr. Howard. It does one good to think of it; and more good to follow such advice. He that will do so, may be cheaply insured against drowning himself, or shooting his neighbor. Would all do so, capital punishment would be abolished in a safer way than by any new statutes.—*Phalanx*.

SCHOOLS OF GENIUS. Franklin, who may emphatically be called the American Philosopher, cultivated the knowledge that at length bore him upwards to the temple of Fame, in a printing-office, under many and great disadvantages.

Bowditch, the celebrated mathematician, studied the principles of his abstruse science in early life, in a ship-chandler's store, then on shipboard, and ever after, in hours snatched from the cares and anxiety of a busy life.

Sir Richard Arkwright, who received the honor of knighthood for his great improvements in, or rather inventions for, the spinning of cotton, and whose beautiful seat upon the Wye is one of the fairest in England, was a poor barber, until he passed his thirtieth year.

Equal to any of the above, is our own Elihu Burritt, known as "the Learned Blacksmith," who, whilst serving an apprenticeship, and pursuing the laborious duties of his business, has made himself master of fifty languages.

The Pen.

[Translated from the Greek.]

I was a senseless thing—a lonely reed!
No blossom hung its beauty on the weed;
Alike in summer's sun and winter's gloom,
I breathed no fragrance, and I wore no bloom.
No cluster wreathed me—day and night I pined
On the wild moor, and withered in the wind.
At length a wanderer found me, from my side
He smoothed the pale, decaying leaves, and dyed
My lips in Helicon! From that high hour
I spoke! My words were flame—were living power.
And there was a sweetness round me. Never fell
Eve's sweeter dews upon the lily's bell.
I shone! Night fled! as if a trumpet called
Man's spirit rose—pure, fiery, disenthralled.
Tyrants of earth, ye saw your light decline
When I stood forth a wondrous, wondering sign;
To me the iron sceptre was a wand—
The roar of nations pealed at my command!
To me the dungeon, scourge and sword were vain;
I smote the smiter, and I broke the chain;
Or, towering o'er them all without a plume,
I pierced the purple air, the tempest's gloom,
Till burst the Olympian splendors on the eye,
Stars, temples, thrones and gods—infinity.

For the School Journal.

School Convention.

According to notice previously given, a Common School Convention was held at Londonderry on the 29th and 30th of June last. The audience on the morning of the first day was small, but it continued to increase till the close of the Convention, and on the afternoon of the second day the meeting was large—the house full. The interest in the exercises of the occasion and the object which the Convention was assembled to promote, increased till the last, and a decidedly good impression seems to have been made on those who were present.

On the forenoon of the first day, Rev. S. Lincoln, of Jamaica, delivered a well written and able address, on the necessity of "Order in School, and the means of securing it." After which, the question, "Whether it is expedient to offer premiums to the scholars who excel," was discussed by several individuals, who, with one or two exceptions, were opposed to offering such premiums, and exciting a spirit of emulation among children. In the afternoon, Ira B. Persons, Esq., of Chester, delivered a forcible and instructive address, on the "Legal and Moral duties and responsibilities of Teachers." After this, the question, "Whether it is expedient to inflict corporal punishment in School," was discussed in a spirited and interesting manner. None of the speakers, with one exception, were prepared to give up entirely the use of the rod; but all were of opinion that it should be used only as a last resort, after all other means had proved inadequate.

On the forenoon of the second day, Rev. S. C. Loveland, of Weston, addressed the Convention on "The importance of a thorough knowledge of the English Language, and the best means of obtaining it." This address was an instructive and scholar-like production, showing the author to have been a man of reading and reflection. Rev. Mr. Brown, County Superintendent of Schools, followed him with remarks on the subject of Spelling. He spoke of the great neglect into which this branch of study had fallen, and of the obstacles in the way of learning to spell the words of our language, and made suggestions as to improved modes of teaching orthography. "The propriety of the practice of teachers boarding around the district," was then fully and ably discussed by a number of persons, and the weight of argument was against the practice. In the afternoon of the same day, an address fraught with useful and important thoughts, facts, and suggestions, was delivered by Rev. Mr. Nott, of Winhall, "On the importance of teaching children politeness, good manners, respect to the aged," &c. The County Superintendent followed him in an address on School Houses,—in which he spoke of their location, construction, and furniture, as they are, and as they should be. A discussion followed on the question, "Whether the present wages of teachers are an adequate compensation for their services." The opinion of the speakers was, that the wages of females, especially, are much too small; and it was strongly and eloquently argued by one of the speakers, that the wages of females in

any department of industry, should be the same as the wages of males for the same services.

The exercises of the Convention were closed by a few remarks from Rev. Mr. Brown, intended to encourage the friends of Common Schools to persevere in their efforts to improve their condition and character.

A great degree of harmony of opinion was evident in all the performances of the occasion, and the utmost good feeling was manifested. The exercises of this convention must have given an impulse to the cause of popular education in the region where it was held, which cannot fail to do great good. The exercises were interspersed with excellent singing from the choir; and the hospitalities of the people, in entertaining those who came from a distance, are gratefully acknowledged. Several towns in the county of Bennington and the county of Windsor, were well represented in the Convention, and all present were evidently filled with zeal for the cause of Education.

July 6, 1847. * * *

Arithmetic.

No. 1.

There is probably no science so imperfectly taught as that of ARITHMETIC. In all the treatises that I have met with, and these are not a few, the arrangement is confused and complicated, the rules unnecessarily numerous. Nor is this all. Many of these rules are positively injurious. They bind down the pupil to a fixed, unalterable form, thus unfitting him for practical business, which cannot always admit of these inflexible methods of calculation. For example, take the rule for Simple Addition, given nearly word for word, in all the books. "Place the numbers to be added, *units under units, tens under tens,*" &c. But can the numbers be always placed so, without inconvenience or loss of time! Country merchants and others commonly enter several charges or credits in their ledger in *one horizontal line*, carrying the several amounts of such charges or credits into the ruled columns. Now, when a youth is required to add these horizontal numbers, unless he is brighter than common, he is completely embarrassed. "I know nothing about *horizontal addition*," he will observe, "the rule says, the numbers must be placed *units under units,*" &c., and a slate or a separate sheet of paper must be procured before he can proceed a step! What an oversight in our sapient instructors!

A similar sort of inadvertency may be noticed in the rule for subtraction, "Place the smaller number under the greater," &c. Now what advantage is to be gained from this arrangement, that it should be given as an invariable rule! Is the position of the numbers of any consequence whatever! Will not embarrassment arise from this stereotyped form, when the difference of two numbers is required, and the *smaller* one appears *first* in the calculation! Besides, in practical business, it is often necessary to subtract numbers placed *horizontally*, as in accounts current, and in the balancing of books, an operation of which this rule takes no notice, and which, in fact, no child learns in the schools. Is this correct! Is it admissible!

Again. In multiplication, substantially the same sort of directions appear as to the arrangement of the numbers,—“Place the *smaller* number *under* the larger,” or “place the multiplier *under* the multiplicand,” *units under units*,” &c., from all which the child naturally infers, that this matter of position is of indispensable importance, a notion which derives additional strength from the usual direction to “place the right hand figure of each partial product *under the figure by which you multiply*.” In actual practice, absurd consequences, like the following, frequently appear on the black-board :

$$\begin{array}{r}
 58 \\
 18 \\
 \hline
 40 \\
 5264 \\
 \hline
 160 \\
 240 \\
 80 \\
 200 \\
 \hline
 210560
 \end{array}$$

Suppose it were required to subtract 18 from 58, and to find the product of their difference by 5264. Here we have eleven unnecessary figures out of 27; more than one-third! and the calculation occupies nearly double the room that is required! I will mention but one more awkward result from fixed forms in multiplication. In a store where I make frequent purchases, I lately had a bill drawn out as follows :

Mr. _____ Bought of _____
 17 y'ds of cloth at 8 cents,
 6 do. do at 34 cents,

and, although the clerk seemed an active, intelligent man, and wrote a beautiful hand, so completely was he chained up by the inflexible forms of the schools, that he was unable to ascertain the amount of these two charges, without using a slate in order to place the “*units under the units*,” or the “*multiplier under the multiplicand*.” How long is so awkward, so imperfect a method of instruction to be submitted to!

This system of inflexible forms, however, whatever may be its defects, must at least be allowed the praise of consistency. In Division, no less than in the other elementary processes, we must of course have *fixed, unalterable positions* for the different terms; the divisor must be written “on the *left hand* of the dividend, with a curve line between them.” But why so! Is it not more convenient to have the divisor on the right hand, both that we may *save room*, and that the *two factors* of the dividend may *come together*, in order to proceed at once to the proof. Surely no good reason can be assigned for a preference to the former form. In order to set my pupils at their ease in this respect, I have always directed them to place the divisor by turns in the four following positions, viz,

$$\begin{array}{r}
 2d \ 3d \\
 24 \ 24 \ 4th \\
 1st \ 24) 36768(24 \\
 \underline{127} \quad 1532 \\
 76 \\
 48 \ 36768 \text{ Proof,}
 \end{array}$$

of which the fourth is by far the most convenient, for the reasons already assigned.

Having thus pointed out some of the disadvantages of fixed, unalterable positions in the elementary processes, which of course affect more or less every arithmetical calculation, I shall proceed in my next number to show that the present methods of calculation are wholly unsuited for business, being not only tedious and slow, but actually more liable to errors in the results. As there is but little use, however, in exposing errors, unless better methods can be pointed out, I propose in my future numbers to offer to your readers an original system of practical arithmetic, which I think will be found not only more rapid and less subject to errors, but also more simple and efficient. I call it an *original* system: for, although we have had an abundance of new systems lately, their originality, I fear, if closely examined, will be found to consist principally in what Sterne wittingly designates as merely “pouring from one cup into another.” Another advantage of the proposed plan is, that it corresponds better with the other branches of mathematics. It is founded wholly on definitions. Artificial rules are entirely dispensed with. T. H. P.

Pittsford, July 5, 1847.

For the School Journal.

Hints to Teachers.

ORIGINAL AND SELECTED.

Public sentiment, which is setting so strongly in favor of the improvement of our common schools, meets with a commendable response from the teachers. The calls for better schools, has been answered by corresponding effort on their part to make them better; and at no period in the history of these institutions, has there been manifested so strong a desire to become qualified for the occupation of instructors, as at the present time. This result is the more gratifying, inasmuch as these efforts for improvement on the part of teachers, is not on account of any pecuniary benefit expected by them, and their sole reward is the consciousness of being able to accomplish more good.—Their motives, it is true, cannot be appreciated by that class of community which weighs every motive in the scale of dollars and cents; but it is fortunate that the children of such are under the guidance and instruction of those who act from more generous and noble principles. To aid such teachers in the discharge of their responsible duties, the following hints are thrown out, which may be continued in future numbers.

THE TEACHER

Should have entire command over himself. He should never appear to be angry, or speak in a harsh, or scolding tone. There is much to try the patience of a teacher; and even the most amiable temper, will sometimes be *ruffled*, if not *roused into a storm*, unless he is continually on his guard. A teacher, however, may be calm, and yet be firm and decided. When he has required any thing reasonable of a scholar, he should not scold and drive him to the performance of it,—but let him know in a few, mild but determined words, that the thing must be done, though the whole school should be suspended in consequence. Few scholars will take the responsibility of stopping the

school if they find that the alternative of their not yielding. If the teacher should, in an impatient, angry, or harsh manner, rebuke a scholar, corresponding feelings will be excited on his part; he will brace himself up to resistance; and if submission is obtained, it will be only by force, and on the first occasion that the teacher's requirements are irksome, they will be again resisted. As a general thing, much talking or reasoning, by way of reproof, fails of its object. A few words, spoken to the purpose, and in a firm, deliberate, and decided tone, will be more effective than a sermon of rebukes.

PUNISHMENT

Should never be public, or before the whole school, except in extreme cases, such as an open, wilful, and wanton violation of the rules of the school. As a general thing, the examination and punishment should be private. Let the offender be detained until after school. If he is obstinate, his obstinacy will be increased by the presence of the school,—he has a character to maintain before his associates, and he will be stimulated to resist, and perhaps answer the teacher disrespectfully; when he would be pliant and perhaps penitent, if examined privately. It may be proper, and sometimes necessary, to mention the result of such examination to the whole school.

GAIN THE AFFECTIONS OF YOUR SCHOLARS.

A kind inquiry after their welfare—an interest manifested in promoting their happiness, will always be appreciated. Improve every opportunity of speaking a kind word to each scholar individually, and especially to those who are most unmanageable. If a scholar is peculiarly turbulent, he may often be won, and rendered the most submissive of any in school, by creating some little office for him, by which he will render you some assistance,—such as making him a monitor, or requiring him to keep a record of the attendance of the scholars. In maintaining a kind familiarity with your scholars, it is not necessary to descend to levity. Although children, yet they may be treated with the same respect that is due to young gentlemen or ladies, and they will in return treat you with corresponding respect, and try to deserve the attention which you pay to them.

SEEK TO INTEREST THE PARENTS,

Especially if a scholar is refractory, and is likely to cause disturbance in the school. Call on the parents and advise with them in regard to the course to be pursued. If this is neglected, they will hear only one side of the case, and will very likely be prejudiced against you, and serious disturbance will be the consequence. A visit to them, and a fair representation made to them of the difficulty, will secure for you their active co-operation and assistance in placing affairs in a right position. Frequent visits to, and conversations with parents about the school, will awaken an interest on their part, which will greatly assist you in carrying on the operations of the school, and securing the progress of the scholar.

STUDIES TO BE PURSUED.

The law requires the teachers to instruct in Orthography, Etymology, Geography, Arithmetic, Grammar, History of the United States, and good behavior, and so

far as possible, it is desirable to confine the scholars to these branches. It is far better that they should be thoroughly drilled in these, than that they should pass over them superficially, and take up the higher branches. The effect of the latter course is generally injurious to the interests of the school. Only a very few, often only two or three, wish to study one of the more advanced branches; yet quite as much and generally more time, will be spent in such a recitation, than in one of the ordinary studies; and time too, which is very much needed to do justice to the other exercises of the school. The whole school thus suffers for the benefit (and that too a doubtful benefit) of two or three scholars. If it seems very necessary, however, in some cases, to instruct in such higher branches, a better way is to omit some of the regular recitations on Wednesdays and Saturdays, and on those days instruct the whole school, or as many as desire it, on these subjects. Such an exercise will give variety to the school, and increase the interest of the pupils.

J. P. F.

Edinburgh Sessional School.

REWARDS AND PUNISHMENTS—ACTIVITY.

The managers of the school, as might be inferred from its origin, aim to conduct it on Christian principles. It was established for the purpose of reforming the vicious, and protecting the uncorrupted. Religious instruction is an important feature of the plan; and it is intended that everything shall conspire to form the heart and the manners, quite as much as to cultivate the mind. Indeed the latter is regarded as deriving its highest value because it is subservient to the former.

In the work before us, one chapter is devoted to emulation, places, and prizes, and another to punishments. Both topics are discussed in a very practical manner, and with reference to the requirements of religion. We may hereafter recur to them. Suffice it to say now, that the principle of emulation is kept in great activity, and that it is regarded as among the means that a Christian teacher not only may but ought to employ; and that the experiment of dispensing with the use of the rod has been faithfully tried in the school, under favorable circumstances, but failed.

The studies are relied on as the chief means of awakening the energies of the children, and thus opening the mind and heart to salutary influences. And among the studies, arithmetic has been found the readiest and most powerful instrument. And we believe that most teachers will more easily rouse a dull school and prepare it for general activity, by means of this study, than by any other,—although much, of course, depends on the teacher's own ability and taste. We close this our second notice of Mr. Wood's book, with a few paragraphs upon this subject:

[EXTRACT.]

"In the historical part of this work, we have already stated, that it was in ARITHMETIC we first succeeded in kindling that ardor, which has since diffused itself through every other department of the Institution. There is no department, indeed, in which either activity or indolence may be more strikingly exempli-

fied than in arithmetic. "The whining school-boy creeping like a snail unwillingly to school," is, in our opinion, but a very faint picture of sloth, when compared with the appearance, which the same boy sometimes exhibits, when nominally engaged at the desk with figures. His lounging attitude, his vacant and listless look, his eye turned ever and anon to the town clock, if such happens to be within his sight, will too surely attest the utter inertness of his mind; unless, perchance, you behold him at the happy moment, when his brightening countenance intimates that his neighbor has invited him to a secret game at nine O's* upon the slate. He thinks, perhaps, that his calculation will do as well to-morrow as to-day; and even if it should be called for sooner, his kind playmate will enable him to finish it, which will quite supercede the necessity of disturbing his repose, or less pernicious amusement, by any thoughts about the principles, on which it is to be accomplished. What a contrast does such a scene exhibit to the activity, which is displayed by some other schools in the same department! We considered the teaching of arithmetic in classes, (a practice which existed in the Sessional School before we saw it,) as peculiarly favorable to the introduction of greater energy in this department of the seminary, than it yet possessed. For this purpose our first object was to render excellence in this department as much a matter of emulation as in the others; and in this we at length completely succeeded, partly by personal encouragement, and partly by bestowing additional prizes for combined alertness and accuracy.—Arithmetic, which had hitherto been one of the duller of their occupations, now became to the scholars a source of the highest interest and amusement. At none of their sports did they ever exhibit greater zeal. They, by degrees, attained a rapidity of movement in this art, which we should have previously accounted quite incredible,† and along with that celerity, a proportional accuracy in calculation. But this was not all. They acquired, at the same time, what, in our opinion, is infinitely more valuable than any arithmet-

* A well known and trifling child's game at schools in Scotland for writing and arithmetic, in which there are nine figures like the letter O, connected by lines according to certain rules.

† Some of our boys multiply the longest line of figures by another figure, (quite according to the common method,) with perfect accuracy, in less than half a second to a figure. That is to say, they will multiply such a line of figures as 7,689,928,165,487,938764, by 7, 8, or any other figure, in less than a sixth part of a minute. From such a line they will subtract another of the same length in the ordinary way, in about seven seconds; and if allowed to perform the operation from left to right, while the question is under dictation, (though it should be dictated with a rapidity which would not permit ourselves to take down merely the original figures,) they will present the whole operation, both question and answer, in scarcely one second from the time of announcing the last figure. In addition, they will sum up seven lines of eight figures each, in the ordinary way, in less than one third of a minute; and if allowed to perform the operation while the question is dictating, in about three seconds. All other calculations they perform with proportional celerity. These modes of working during the dictation (when allowed) are suggestions of their own in their zeal to surpass each other, and not taught by the master.

ical attainment, that general energy and activity of mind, which we found of so much service in the introduction of all our subsequent improvements, and which we doubt not has in a great measure formed the character of many of them for life.

It is sometimes observed, that accuracy in calculation is infinitely more important than rapidity. This is a proposition which no one will call in question; and therefore, if the two things were necessarily or naturally opposed to each other, there can be no doubt which should be preferred. But if, on the other hand, the two are, under proper discipline, found to go hand in hand,—if he who performs a calculation with ease and rapidity, performs it with no less accuracy, than he who does so with difficulty and sluggishness,—“if,” in a word, the operation “were done when ‘tis done,—then” surely, “’twere well it were done quickly.” The friends of accuracy in calculation must undoubtedly admit, that this correctness is best to be attained by practice, and who is it, that, in his early years, enjoys most the benefit of such practice? He who performs one calculation in an hour, or he who perhaps performs sixty of a similar kind in the same time. Nor need we here repeat what we have already said, of the opposite influence of these two methods, in forming the permanent character of the pupils.

Much astonishment has been excited by the success of the Arithmetical department of this institution, and high approbation has been bestowed upon it. In no other way, however, can its instructors be said to have contributed to that success, than by the zeal which they excited in the breasts of the young people themselves. Their own exertions accomplished the rest. It has been one of our leading objects to explain particularly the principles, and to point out the various processes, with which we ourselves are acquainted, for carrying these principles into practice; but the application of the principles, and the selection of the particular operation, are in each case, left to our pupils themselves, who frequently devise new combinations, and far shorter and easier methods, than occurred to us. In many schools a quite opposite practice prevails. In these, upon the same principle, by which the pupil is compelled to repeat every rule in the same undeviating words, and to give every translation in precisely the master's own language, he is also required to perform every arithmetical calculation in the particular manner, which has been pre-emptorily enjoined by the master, or has been prescribed in some particular book. With us, on the contrary, the scholar is not only permitted, but encouraged, to take his own way; accordingly, out of half a dozen of boys performing the same calculation, it not unfrequently happens, that no two of them have been following the same method.”

We will merely add, that teachers may find important aids in any attempt to cultivate activity and promptness, in Mr. F. A. Adams's Arithmetic.

The Parent who would train the child in the way he should go, should go in the way he would train the child.

Selected by a Correspondent.

SONG FOR THE CHILDREN WHO GO TO SCHOOL.

Perseverance; or, Try Again.

I.
 " 'Tis a lesson you should heed—
 Try again,
 If at first you don't succeed,
 Try again.
 Then your courage should appear;
 For if you will persevere,
 You will conquer, never fear,
 Try again.

II.
 Once or twice though you should fail,
 Try again;
 If you would at last prevail,
 Try again.
 If we strive, 'tis no disgrace,
 Though we may not win the race—
 What should you do in that case?
 Try again.

III.
 If you find your task is hard,
 Try again.
 Time will bring you your reward,
 Try again.
 All that other folks can do,
 Why with patience should not you?
 Only keep this rule in view,
 Try again."

HOW TO SPEAK TO CHILDREN. It is usual to attempt the management of children either by corporal punishment, or by rewards addressed to the senses, and by words alone. There is one other means of government, the power and importance of which are seldom regarded—I refer to the human voice. A blow may be inflicted on a child, accompanied with words so uttered, as to counteract entirely its intended effect; or the parent may use language, in the correction of the child, not objectionable in itself, yet spoken in a tone which more than defeats its influence. Let any one endeavour to recall the image of a fond mother long since at rest in heaven. Her sweet smile and ever clear countenance are brought vividly to recollection: so also is her voice; and blessed is that parent who is endowed with a pleasing utterance. What is it which lulls the infant to repose? It is not an array of mere words. There is no charm, to the untaught one, in letters, syllables and sentences. It is the *sound* which strikes its little ear that soothes and composes it to sleep. A few notes, however unskillfully arranged, if uttered in a soft tone, are found to possess a magic influence. Think we that this influence is confined to the cradle? No; it is diffused over every age, and ceases not while the child remains under the parental roof. In the boy growing rude in manner, and boisterous in speech! I know of no instrument so sure to control these tendencies as the gentle tones of a mother. She who speaks to her son harshly, does but give his conduct the sanction of her own example. She pours oil on the already raging flame. In the pressure of duty, we are liable to utter ourselves hastily to children. Perhaps a threat is expressed in a loud and irritating tone; instead of allaying the passions of the child, it serves directly to

increase them. Every fretful expression awakens in him the same spirit which produced it. So does a pleasant voice call up agreeable feelings. Whatever disposition, therefore we would encourage in a child, the same we should manifest in the tone in which we address it.

THE RIGHT USE OF HISTORY. The stories of Alexander and Cæsar, farther than they instruct us in the art of living well, and furnish us with observations of wisdom and prudence, are not one jot to be preferred to the History of Robin Hood, or the Seven Wise Masters. I do not deny but history is very instructive of human life; but if it be studied only for the reputation of being an historian, it is a very empty thing; and he that can tell the particulars of Herodotus and Plutarch, Curtius and Livy, without making any other use of them may be an ignorant man with a good memory, and with all his pains hath only filled his head with Christmas tales. And, which is worse, the greatest part of history being made up of wars and conquest, and their style, especially the Romans, speaking of valor as the chief if not the only virtue, we are in danger to be misled by the general current and business of history; and, looking on Alexander and Cæsar, and such like heroes, as the highest instances of human greatness, because they each of them caused the death of several hundred thousand men, and the ruin of a much greater number, overran a great part of the earth, and killed the inhabitants to possess themselves of their countries—we are apt to make butchery and rapine the chief marks and very essence of human greatness.—*John Locke.*

FRESH AIR. Horace Mann has well said—"People, who shudder at a flesh wound and a trickle of blood, will confine their children like convicts, and compel them, month after month, to breathe quantities of poison. It would less impair the mental and physical constitutions of our children, gradually to draw an ounce of blood from their veins, during the same length of time, than to send them to breathe, for six hours in a day, the lifeless and poisoned air of some of our school rooms. Let any man, who votes for confining children in small rooms and keeping them on stagnant air, try the experiment of breathing his own breath only four times over: and, if medical aid be not at hand, the children will never be endangered by his vote afterwards."

INFLUENCE OF A TEACHER. The famous *Abelard*, one of the Professors of the University of Paris, in the 12th century, had as his pupils, twenty persons, who afterwards became *Cardinals*, and more than fifty, who became bishops and archbishops. The *Cardinals* are the highest officers in the church of Rome next to the Pope, and are his counsellors. When we consider this man as forming the minds of these twenty cardinals, whose influence was then felt throughout Christendom, and of the fifty bishops, whose influence was felt over kingdoms, who can calculate the effects produced upon the world by that one teacher?

THE AGRICULTURIST.

Budding.

THE SEASON. August is the season for budding fruit trees. With cherries and plums, and sometimes with apples and pears, one may begin in July, and peaches do well in September. The criterion in regard to the time is, that the bud to be inserted is well formed and that the bark peels freely on both the scion from which the bud is taken, and the stock into which it is inserted.

THE STOCK. The most suitable stocks for budding are vigorous seedlings in their second year. Sometimes they are large enough the first season; and peaches generally are so. Budding, however, succeeds well on trees of any size.

THE BUDS. Cut twigs, as for grafting, from bearing trees, the growth of the present season, and with buds well formed at the bottom of the leaf-stalk.—Cut off the leaves immediately, leaving the leaf-stalks to handle the buds by. Choose twigs of vigorous growth, from the end of bearing limbs.

THE PROCESS. Select a smooth place in the stock (in small stocks, quite near the ground,) and make a perpendicular slit quite through the bark, an inch long. At the upper end of the slit, make a cut across it, extending say an eighth of an inch on each side of it, so as to allow the bark to peel up freely to admit the bud. Take your stick of buds, and rejecting three or four of the lower ones, enter your knife half an inch above a good bud, and cut it out, with a thin strip of the wood, say half an inch long, immediately under the bud, bringing the knife out half or three fourths of an inch below the bud. Put this between your lips; and with the thin handle of your budding-knife, carefully raise the bark where you have made your incision. Then take the bud by the leaf-stalk and quickly insert it, entering it at the cross incision and pushing it downwards under the bark nearly its whole length; or so as to leave an eighth of an inch above the cross cut. Cut it off square with the cross cut, and by a gentle pressure upwards assure yourself that the bark of the stock and that of the bud are in contact at the top. Tie it with moist bass matting, corn husks, woolen yarn, or something of the sort; and the work is done.

AFTER TREATMENT. In about ten days it is generally necessary to take off or loosen the ligature, on account of the swelling of the stock; and by that time the bud will have formed its connection with the stock. In the spring, as soon as the bud begins to swell, the stock should be cut off two or three inches above it; and as it grows, it is sometimes necessary to tie the new shoot to the stump of the stock to insure its upright growth. At mid-summer the stock may be cut off close.

REMARKS.

1. The practice has been till lately to take out the narrow strip of wood, which is cut off with the bud. Some practice it still, and we think the work is more neat and perfect where it is perfectly done in that way. In doing this, care must be taken that the

root of the bud is left uninjured. If, after removing the wood, there is a hole opposite the bud, it is worthless, and must be thrown away. The insertion of the bud without removing the wood, saves this trouble, and is now the more general practice in this country.

2. Care must be taken not to injure the soft organizing matter under the bark of the stock, when raising the bark, or pushing in the bud.

3. The work can be done with any knife that is sharp enough. For raising the bark, the operator's thumb-nail will generally answer, and needs only to be placed at the slit, and pressed gently against its sides near the top, at the same time raising the bark from the wood.

4. In tying, the object is to keep the bark of the bud in contact with the soft organizing matter of the stock. This is best done by using two ligatures, one to tie it below and the other above the bud. It is better completely to cover the incision with the ligatures, so as to exclude the air, leaving only the bud and the leaf-stalk exposed. In working some kinds of plums, the Green Gage for instance, if the wood is taken out, care is necessary so to adjust the ligature that it shall be sure to press the root of the bud upon the stock. To insure the best success, the bark of the bud must be pressed equally upon the stock its whole length. Too tight a binding, however, may be fatal.

5. It is better to bud in cloudy weather, or in the morning or evening, to avoid the drying influence of the mid-day sun.

6. Some recommend that buds be inserted on the north side of the stock, for the sake of shade; others on the south side, to insure a more rapid growth. A more important point is, the form of the stock, which often presents such a crook or inclination as to allow the insertion of the bud so as to insure its erect growth without further trouble.

7. Pears will grow, budded on the apple, quince, thorn, or mountain ash. They cannot be relied on to thrive permanently, however, upon the apple or ash. When worked upon the quince or thorn, they come sooner into bearing, but are dwarfed and not so long-lived.

For the Vermont Agriculturist.

Mowing in Rainy Weather.

In wet weather cows give less milk, to say nothing of its quality, than in dry weather. This was quite apparent last night and this morning, after the recent rain. Is not this because the rain washes off, or soaks into, the saccharine quality of the grass? If this be so, should it not furnish a hint to mowers, to stay their hand in wet weather—even if the grass does not *easier* than in dry weather?

Thursday, July 15th.

Q.

Is our correspondent satisfied in regard to another question, namely: How far the diminution that he mentions, in the quantity of milk, is to be attributed to the rain, and how far to the change of temperature? Other things being equal, cows give more milk on warm than on cool days. His inquiry, however, is

the more practical one,—at least for summer. It is known that grasses and other plants take up and throw off a great amount of water daily, and that the amount depends very much upon the supply within reach. Hence grasses, like most fruits, grown upon a dry soil, have thicker and richer juices than those on moister lands, while the juices of the latter are more abundant. We may infer from this fact that, independently of the external washing, there is a deterioration in the juices of grasses immediately after a rain, and that hay cut after some days of dry weather has the advantage in regard to sweetness and richness. Rain finds its way into the sap vessels of growing plants in a very short time.—[Ems.]

The Study of Agriculture.

We have all heard of Weathersfield onions. Some parts of Essex Co. Mass. have become famous for the production of the same article. The crop is made very profitable; and many have accumulated respectable sums for farmers, solely by the cultivation of onions for a few years.

This results, we suppose, not from any peculiar advantages of the crop so much as from skilful cultivation and management. When one devotes his attention to a single crop, he stands a chance to understand it from beginning to end—the preparation of the soil, the choice and application of manure, the selection and sowing of the seed, implements, cultivation, harvesting, selling,—everything connected with the crop till he pockets the avails. The subject is limited, and he can master it. Well, the best management of the onion crop requires as much study and skill as half the trades at which boys serve a long apprenticeship in order to perfect themselves.

When one has mastered the onion crop, however, he has advanced but very little way towards a complete acquaintance with the business of a New England farmer. He has a dozen other crops, each of which require equal study and skill. And this is one reason why we see so little really first rate cultivation. Farmers do not master the subjects that come before them—that is, the knowledge of their crops, from seed to sale—and hence their crops are unskilfully managed and of small profit. They try to make up the deficiency by harder work, and by more hours in the field. But in that they are wrong.—They spend hours enough in the field and work hard enough. It is the mind that needs to be taxed more; the muscles less. And our farmers, to a certain extent, know this perfectly well. They are all familiar with the fact that a live Yankee with his wits about him, is worth three stolid Europeans who never really understood a single thing that they were doing.

It is true that we must eat our bread by the sweat of the brow. But then it depends on the use we make of other powers that God has given us, besides our muscles, whether a gallon of sweat shall give us a hundred bushels of corn or only twenty. It is as much the ordinance of Heaven that man should observe, inquire, think, in order to get his daily bread, in order to success,—as that he should work with his own hands.

The following remarks on this subject from the Genesee Farmer are to the point:—

[EXTRACT.]

Undoubtedly the Creator could easily have formed every acre of land, so that the most ignorant man alive might plough and sow it, and reap one hundred bushels of wheat on the same, year after year for his whole lifetime, without impairing its fertility. But such abundance would have been an enduring bounty on ignorance, if not on vice and crime. Knowledge is necessary to renovate any large tract of country, which has been much injured by unwise tillage; and this knowledge can be best acquired by uniting the study with the practice of agriculture.

The study of agricultural science implies no more nor less than the investigation of the laws of our own being, as social, physical, moral and rational creatures. It is only a question of time, when we shall begin to learn *what it is* that forms good bread, milk, butter, cheese, potatoes, beans, peas, lean meat, wool and bone. We can not go on forever, increasing hungry mouths to be fed three times every day, and wasting, to the tune of untold millions, the constituents of our daily food, and not pay for our folly.

Every body knows that there would be some difference in a loaf of bread, whether it was made out of a pound of good wheat flour, or a pound of oat straw! We are wonderful nice about our own food, but we expect our wheat plants to elaborate fat, muscle, brain and bone for us, and use materials as foreign from human flesh and blood, as copper, arsenic, and lead! We are all exceedingly fond of good bread, milk and potatoes, while we heartily despise the patient study that will inform us what are the simple elementary bodies that unite to make these articles of food. We greatly magnify the importance of blind hard work, as though man had the power to create a bushel of corn out of nothing, by dint of protracted and intense muscular toil. To study the nature and properties of the substances that nature *must* have to form eighty bushels of this grain on an acre, is a perfect waste of time! A knowledge of these things can be of no possible use to the practical farmer! Who cares to know what there is in a kernel of corn, or a sound, mealy potato! These things can be made out of nothing, *only work hard enough!* A gallon of human sweat, spread evenly over an acre of land, is better than all the agricultural science in the world, because it can be sold any day in August for *fifty cents!*

If it were not for the indifference of farmers to the spread of agricultural knowledge, rural industry would rise at once fifty per cent in productiveness and value. So long as the tillers of the earth shall work twelve or fifteen hours in twenty-four, to make something out of nothing, the balance of the world will give them but a precious little for their service. And why should they? If a farmer gives as much labor for one bushel of corn or wheat as he should for three, ought he not to exchange his badly directed industry, by giving three day's work for one with those that study their business, and make every hour's work tell to best advantage? We cannot blind our reasoning faculties, and then plead ignorance of the things that

form our annual crops, as a reason why we should have more than the market value for our produce. There is no alternative but to lessen the hard work now expended in growing all our agricultural staples, by the aid of knowledge. If we cruelly withhold this knowledge from our sons, we indirectly give a bond that they shall be the hewers of wood and drawers of water for the better informed, and that, too, at the smallest wages, all their days.

Kind reader, if you have a son, and believe with us, that the study of the laws of Nature will do him no harm, purchase for him Mr. Jas. F. W. Johnston's "Lectures on Agricultural Chemistry," latest edition, which will cost you but \$1 25. Let him buy, as soon as he has thoroughly studied Johnston, Bous-singault's "Rural Economy," which will cost a dollar and a quarter more. These invaluable works should be in every common-school library in the State. We commend them to the attention of all teachers of young men in academies, and other seminaries.

There is scarcely ten farmers in the whole State (of New-York) that feed all their cultivated plants, including fruit trees, grape-vines, and strawberries, as they should be fed. The same is true, to some extent, in regard to feeding, with the most appropriate and economical food, all domestic animals. How important, as well as interesting, is the study of the organic structure of all the living things kept on the farm! These organized vegetable and animal beings possess many *organs*, and each organ has its peculiar office to perform.

Do we work *with* or *against* the purpose of nature, in our treatment of all these vital functions? Are we sure that we obtain the largest possible crops of peas, potatoes and corn, from any given amount of land and labor? or the largest return in good pork, for the corn, peas, and potatoes, consumed by our swine? How is it in regard to the production of grass, carrots, beets, beef, butter, cheese and wool? Whose wool, worth thirty cents a pound, cost him the least money in land and labor? Whose cheese and butter yield him the largest profit or compensation for his industry? When we export 1000 tons of cheese to England this fall, how much truly valuable matter have we drawn from our pastures? Where are the *precious things*, in boundless quantity, that make cheese, wheat, and wool? What madness to resist the study of these things.

FOREST TREES. A writer on Natural History, in an article relating to forest trees, says, they recall the idea of our native country in the most forcible manner, wherever they are met with, and are often the first objects that attract the attention of those who have been long absent from their native land, and who, on their return, pour out their genuine effusions of joy on beholding them. Many an American has sighed under the shade of the banana for a sight of the village elm, the well known oak, or the unchanged pine of New England. We are told of a young Indian, Pontaveri, from Otaheite, who, amidst the splendor of Paris, regretting the simple beauty of his native land, sprang forward at the unexpected sight

of a banana tree in the Garden of Plants, embraced it, while his eyes were bathed in tears, and exclaimed with a voice of rapture: "Ah! tree of my native country!" seeming, by a delightful illusion of sensibility, to imagine himself, for a moment, transported to the land which gave him birth.

Making of Cheese.

In conversation with one of the largest wholesale cheesemongers and provision dealers in the country, he suggested that there were two great faults of the American cheese, which somewhat prejudiced its sale in the English markets. He is a person in whose character and experience entire confidence may be placed.

He was pleased to say that he had cheeses, from the United States, as good as any he had ever seen, and that the general character of the article was greatly improved since the first importations.

But the first fault was the softness of the rind. It often cracked, and the cheese became spoiled from that circumstance. This he considered as owing to the cheese being too rich; if so, it is a fault which may be remedied. The English cheeses soon acquire a great firmness. I think proper, however, to add the directions of a most experienced and successful dairy farmer in respect to this matter. He says that the rind may be made of any desired hardness, if the cheese be taken from the press and allowed to remain in brine so strong that it will take up no more salt, for four or five hours. There must be great care, however, not to keep it too long in the brine.

The second fault is the acidity, or peculiarly smart bitter taste often found in American cheese. He thought this might be due, in part, to some improper preparation or use of the rennet, and in part to some kind of feed which the cows found in the pastures. Both these matters are well worthy of investigation, and that alone can determine.

He was of opinion, likewise, that American cheese would sell better if it were colored like the English cheese. The market for it was fast becoming more extensive.

In respect to American Butter, he considered that which usually came here as a most inferior article. Most of it, I believed, is used in the manufacturing districts, solely for greasing machinery. Salt butter, or butter strongly salted, is not saleable, in the English market; and especially the salt must not appear. I cannot doubt however, that presently some of our best June or September butter, put up in lumps, would find a good market here,—if, in truth, we have any to export. The very best fresh butter in London market, however, does not bring so high a price as I have often paid for the best article from the county of Worcester, in Boston market: and I have frequently known the best butter to be sold in Baltimore, and even in Cincinnati market for half a dollar; a little more than two shillings sterling per pound.

I have seen in England none of the admirable spring-houses which are to be found in Pennsylvania.—*Colman's Tour.*

Culture of Grapes.

CLEMENT HOARE is recognized as the highest authority in regard to the culture of grapes on open walls in England. In the use of his instructions in this country great allowance must be made in some particulars for differences of climate and soil. Our summers are warmer, but our season not so long, and vines grow more vigorously with us. But the following Notes from his Treatise, embracing in a few words some of the leading points in regard to which difference of climate will demand the least difference of treatment, will be welcome to very many of our readers:

NOTES FROM CLEMENT HOARE ON THE CULTIVATION OF THE GRAPE VINE ON OPEN WALLS.

1 pound of grapes may be grown to 1 square foot. A vine should not occupy more than 40 to 50 square feet,—and will take 20 years to gain strength enough completely to cover that with *mature* fruit.

The wood that bears fruit one year never bears any afterwards.

Scale of the greatest quantity of grapes which any vine can *perfectly mature*, in proportion to the circumference of its stem, measured just above ground:

Circum.	Pounds.
3 inches.	5
3½	10
4	15
4½	20
5	25
5½	30

And so on, increasing 5 pounds for every half-inch of circumference.

Vines under 3 inches should never be suffered to mature fruit.

When more grapes are left, they are not *perfectly* ripened.

At the autumn pruning, leave one bud (rejecting the two bottom ones on each shoot) for every ½ lb. of grapes to be produced.

Best exposure, south-eastern to eastern—but so as to avoid winds as much as possible. Grapes do well as far as the due west point, if protected from wind.

Every naked branch of a vine that does not *directly* produce foliage diminishes the capacity of the plant for the production of young bearing shoots. Naked branches are consumers; not producers.

In pruning leave a sufficient supply of bearing shoots on the least possible proportionate quantity of old wood.

Each bearing shoot requires to be trained so as to leave 9 inches clear on each side; and each wood shoot 5 inches.

Curve the wood shoots in training, so as to make short-jointed and well-ripened wood, by retarding the flow of sap.

Fruit to be cut out, so as to leave only a proper crop, as soon as the berries are set.

Take care that the bunches be shaded by leaves, so that the direct rays of the sun never come upon them; only the thickness of one leaf over the fruit.

Half the berries in a bunch to be thinned out, when

as large as small peas. This is essential to good fruit—hastens maturity, &c. Keep thinning subsequently, so that the berries shall not touch each other when ripe;—sometimes 4 out of every 5 to be cut out. Use plenty of liquid manure and water while the berries are in the latter stages of swelling. Water the leaves and fruit at night. Stop when they begin to change color.

Never take off the leaves.

The sooner the vine is pruned in the fall of the year, the earlier will its buds unfold in the ensuing spring.

Salt the vines in the spring—a gallon to every square rod of the border.

Mr. Denny of Westborough.

EXAMPLE AND INFLUENCE OF A "BOOK FARMER."

But we began this article with the intention of recording our observations on the agricultural operations of the Hon. George Denny. The farm belonging to this gentleman, and on which he resides, lies a short distance to the southward of the railroad station in Westborough. It consists, we suppose, of about one hundred acres,—forty of which are a reclaimed meadow, lying directly in front of his house, on the opposite side of the road. The other part of his farm consists of pasture, orchard, fields of grain and vegetables, wood land, and an extensive garden adjoining the mansion house on two sides. Some hundreds of apple and peach trees have been recently planted, and have not yet come to the bearing age. Many old apple trees, which were on the ground when it came into his possession, have been grafted, and seem to be renewing the state of their youth. Those which were first planted by Mr. Denny are putting forth their fruit.

The meadow, mentioned above, has been reclaimed within a few years—we believe, five or six. A portion of it produced, last year, four tons of the best of hay to an acre. We walked over a section of this land, one day last week, with some difficulty. The grass was very thick, and from two to three feet high. On the whole, the crop was about the tallest we have seen. A few small patches are planted with potatoes, among which we saw no indications of disease. No gravel or other foreign substance has been spread over this meadow. The first process was too clear out the logs and stumps, some of which had probably lain there for a century, and were partially imbedded in the mud to a considerable depth. Deep and broad ditches were dug, and the harrow was then passed over it to smooth the surface.

It is about a dozen years since Mr. Denny left his residence in the city of Boston, and relinquished mercantile pursuits for the more pleasant occupation of a farmer. He began his operations without experience, and with no other knowledge of farming than what he obtained from books and the suggestions of an active and intelligent mind, improved and quickened by reading and observation. The example of one such man in each of our country towns, would produce almost incalculable improvements. When Mr. Denny took possession of his farm, it is said, there was

not a barn cellar in the town of Westborough. He immediately constructed one—partly for the purpose of preserving roots for feeding cattle, and partly for the making of manure. His cows are kept in the barn by day as well as by night. All the manure, both solid and liquid, passes into the cellar, and is there mixed with loam, of which several hundred cords are made in a year. His example, though sneered at by some of the old farmers, has been followed, and, we are told, there is hardly a barn in the town that is not furnished with a cellar and the necessary accommodations for the manufacture of manure. Adjoining the apartment where Mr. Denny keeps his cows is a shed with a watering trough and a sort of a table or form, which is always kept supplied with salt. Here the cows can take as much as they choose and whenever they are so inclined.

Mr. Denny's next door neighbor is a mechanic, who owns a few acres bordering on the meadow above described. And here is another illustration of the benefit of good example. Following Mr. Denny's reclaiming process, he has converted these few acres from a worthless swamp to a valuable meadow, producing a luxuriant crop of grass. Such men seem to be the special agents of Providence to carry on its benevolent designs in regard to the human race. They seem to be fulfilling the destiny of man, to whom the earth was given, with instructions "to dress it and to keep it," and to make it the abode of peace, prosperity, and happiness.—*Boston Courier*.

That Extra Cow.

Mr. Richardson has furnished us, according to agreement, the following statement in relation to his cow, of which we made mention a fortnight since:

Quantity of milk given from the 13th to the 20th of June, in pounds,—

	Morning.	Noon.	Night.	Total.
Sunday,	17	16	15½	48½
Monday,	18	16½	13	47½
Tuesday,	18	18	15½	51½
Wednesday,	18	17	15	50
Thursday,	18½	18	12½	49
Friday,	18	18½	15	50½
Saturday,	17	18½	13	48½
				345½

The following is the amount of Butter made from the milk:

First churning, Thursday, after being worked over once, weighed	9½ pounds.
Second do., Monday,	8½ "
	18 "

The cow was bought from a Vermont drove, by Mr. Hawes, in 1840, and sold to Mr. R. in 1845; is supposed to be simply of native breed, about nine or ten years old,—bought for a good cow, neither extra nor common, but good. She calved in February previous to his buying her, and that year her milk did not exceed one pail-full at any one milking, being milked twice a day. She was milked until five days before the time of calving the next March. This year

she appeared uneasy in the middle of the day, and having examined, he found the milk dropping from her bag, and then commenced milking her three times a day. The present year he milked her until four days before the time of calving, using every means to dry up her milk; giving her husks and dry hay.—The first year her feed was a good pasture, and in addition to this, a peck of apples daily, as soon as they began to fall, and when the windfalls increased, he increased the quantity to three pecks, without regard to quality, whether sweet or sour. When more apples were gathered than were used, the mellow ones were selected.

The next year the feed was similar, except that in the fall, the quantity of apples was increased to a bushel, when she would eat them. The past winter she had either a peck of potatoes or a peck and a half of carrots, or beets, and two quarts of cob meal; with the slops made in the house, by a small family; this feed was continued until the first of March,—her hay being the second crop. This year she calved the 20th of April, and turned out to grass the first of May.—No feed was given her after calving, except hay and grass, until it was noticed that she was making an unusual quantity of butter. Mr. R. then saved the milk for seven days, not knowing the quantity, and from it made seventeen pounds, as was noticed in our paper, of the 11th inst. Feeling curious to know the quantity of milk given, he commenced weighing the milk at each milking, and obtained the results given above.

Her feed for the first seven days after Mr. R. commenced the trial, was three quarts of cob meal, and her skimmed milk, in addition to the pasture. The second seven days, it was the same. In respect to apples as food for cows, Mr. R. gives as his opinion, that two bushels of apples are as good as one of potatoes.—*Fitchburg Sentinel*.

Railroads and the Farmers.

The introduction of canals and railroads, and their extension into all parts of the country, is working a change to which many farmers in older portions look with evident alarm. By these facilities for intercommunication and transportation, the growers of bread-stuffs and provisions on the fertile prairies of the vast West are brought into direct competition with those of the seaboard and interior of the Atlantic States. The alarm is given, that our farmers cannot stand such competition, that their business will be ruined, and the value of their real estate destroyed.

In these fears we do not participate. There may be some inconvenience, and some apparent present loss, in accommodating ourselves to the change of circumstances, but we must do it, whether we will or no, and, in our apprehension, it will be done so gradually as to produce very trifling inconvenience or loss. When it is done, we shall find that railroads have done more to promote the agricultural prosperity of New England, and to enhance the value of the farmer's property, than any other cause of recent date.

In all time past, and all the world over, it always has been the case, and it always will remain to be

so, that, wherever a local market is created, the farmer is more prosperous, and his estates bear a higher value, than where he depends entirely on a distant market for the sale of his products. In the vicinity of all great towns, land always bears a comparatively high price, because it will pay a profit on such price.

Now, the tendency of railroads is to build up towns wherever they go, and to create a local market in the vicinity. They afford such facilities for carrying on almost every kind of manufacturing and mechanical business as to bring these establishments to the doors of the farmers, instead of compelling the farmers to send their produce a great distance to them—a distance which would absorb a considerable portion of the value of the commodities in the expense of transportation. As evidence of this, we need but look at facts. Every where in New England that railroads have been constructed long enough to have their legitimate effects, villages have grown up on their line, new kinds of business have been introduced, and property, in their immediate vicinity, has been appreciated in value. The area over which this influence extends every year, widens as time is given for the change to work its way.

The change, then, to which farmers must be subjected, is, to cultivate for a home market, instead of raising the great staples for one that is more distant. Prime lump butter, any where within ten miles of the villages and towns upon the railroad, or where they can get it weekly to market by railroad, is worth nearly twice as much as it is where they are compelled to lay it down and keep it for a distant market in the winter. Lambs, veal, vegetables of various kinds, and all descriptions of fruits are comparatively more valuable. The effect, then, of the railroads eventually will be, to give the vicinity of the places they pass through nearly all the advantages they would possess if located near a populous city.

With the culture of many things adapted to this change of circumstances, especially of the more valuable fruits, a considerable portion of our agricultural community are not very well acquainted. The sooner they acquaint themselves therewith, so as to adapt themselves to the change, the more to their interest it will be.—*New England Farmer*.

How to Raise Turkeys.

Before giving our rules to be observed in raising turkeys, let us draw a comparison. There are few farmers but can raise 100 turkeys—these 100 turkeys will weigh, when fattened, in December, upon an average, 7½ pounds each, full dressed. We say *full dressed*, for it is the practice in some places to divest the turkey or nothing but its head and feathers, and then take it to market,—a practice as uncivilized as it is disgusting. These hundred turkeys then will weigh 750 pounds, which in market are equal to 1,500 pounds of pork. But if the male turkeys are kept until February or March, they will not only increase in weight, twice the amount of their feed, but the price in market will be much higher.

We will now give the rules to be observed in raising and fattening them, founded wholly on our ex-

perience. Turkeys intended for breeders, must be kept well during the winter. If put in good condition, however, in December, it takes but little feed to keep them so. Their nests for laying must be made with hay or oat straw, under cover, and be well protected from the weather, and from vermin. When incubation commences, the turkey must not be disturbed, and if she does not come from her nest for food and water, she must have both placed by her on her nest. When the young turkeys are hatched, they may be allowed to remain one day on the nest, or if removed, let them be sheltered in a warm place, and plenty of straw for them to set upon, for they are now extremely liable to take cold. The second day feed them with curds, or warm clabbered milk mixed with a little Indian or barley meal. They must be kept up and fed in this way for two or three days, and longer if the weather should be cold or rainy, but as soon as a warm and pleasant day comes, let them out at nine or ten o'clock, and shut them up at four; and this practice of letting out and shutting up must be followed for 5 or 6 weeks, and on no account let them get wet. When a young turkey begins to droop, there is but little hope for it. There is no danger of keeping them too warm. When they are five or six weeks old, put a little grease on their heads to preserve them from lice.

At the age of six or eight weeks the turkey is more hardy, but still should not be exposed to rains or the damp nights, for a few weeks longer. If the farmer has a plot of grass let him enclose a yard with a high fence, and crop the wings of the old turkeys, and continue to feed them with clabbered milk, and whatever else he pleases that comes from the kitchen, such as broken bread, potatoes, and the like. If he has a clover field, as soon as it mown, let them run on it, and they will live on young clover. And as soon as the crops are off the ground, say in August or September, let them range on the farm; but see to it, that they come to their roosting place at night, and have water.

In December the turkeys will be large enough to fatten, and for this purpose select as many as you please, and shut them up—next take to the mill a few bushels of ears of Indian corn, and have it ground—then boil potatoes, and mix the meal with the scalding water and potatoes in a tub, say in the proportion of one bushel of potatoes to one peck or more of meal, and stir them well together, then let it cool, but give it to the turkeys warm as they will bear it, and in three weeks they will be fat enough for market.

We do not take this from books, but from several years' experience. We kept an exact account of the expense of raising and fattening a flock, and at the rate of ten cents a pound full dressed, we received \$72, while our cost exclusive of sour milk, was less than \$10. If any farmer does not wish to be at the special trouble of raising them, but should have a small flock to fatten, that have lived "in spite of wind and weather," let him adopt our rules of fattening and he will "save much corn." On a large farm, and with a large yard and butter dairy with proper attention we believe it may be made a leading business to great profit.—*New Jersey Journal*.

Suggestions to Cheese Makers.

There are some suggestions of importance, which we find in a prize essay describing the method practised in making the celebrated English Cheshire Cheese, which we subjoin.

A very important point in Cheese-Making, is the *temperature of the milk when set*. If this be too high, the curd will indeed 'come' quicker, but both the quantity and quality of the cheese are deteriorated; if too low, the curd is so long in gathering and compacting, that risk is incurred of its becoming sour, and the cheese when made, has besides, a tendency to green mould. From the careful observation of the author of the essay, it appears the temperature at which milk is commonly set in the best dairies is between 80 and 85 degrees. This point can of course, only be precisely determined by a thermometer. In American dairies, a much higher temperature is generally adopted—commonly from 90 to 96 degrees; and to this difference, may, we think, in part be ascribed the admitted superiority of Cheshire cheese.

The proper quantity of rennet can be best ascertained by observing the time required for the milk to coagulate; since the stronger the rennet, the quicker the coagulation, the temperature being the same.—Sufficient rennet is used to bring the cheese in about an hour and a quarter. The consequence of putting too much rennet is, that an unpleasant flavor or bitterness is thereby imparted to the cheese, and hence the importance of using only just sufficient to answer the desired purpose. The flavor also suffers when rennets are employed which have not sufficient age; eight or ten months is as little as is advisable—a year is better. The curd is brought to a fit state for breaking, when the color of the whey is a pale green, and separates distinctly from the curd on a slight pressure.

The quantity of salt used, is 1 lb. to from 40 to 45 lbs. of dried cheese; or on an average, 1 lb. to 45 lbs. of curd. From an experiment made at the suggestion of the writer of the essay, he is of the opinion that a less quantity—say 3-4 lbs. of salt to 42 lbs. curd—would cause an improvement in quality.

The gradual pressure of the curd, when put in press, very light at first, and increased as the cheese becomes dryer, is much regarded; for, if this is not attended to, a considerable quantity of butyraceous or oily matter is forced out and the richness of the cheese diminished.

The greatest difference in the process pursued by English and American cheese-makers, appears to consist in the length of time the cheese is pressed. In America, this is seldom more than 24 hours; in Cheshire, it is continued usually four days, and in some dairies longer, the cheese being repeatedly turned. One great obstacle to the sale of American cheese in the English market, is this deficiency in pressing, by which, it is complained, the keeping qualities of the cheese are impaired.

The quantity of saleable cheese produced from a gallon of milk, supposing little or no cream has been taken from it, is one pound. In autumn, there is more curd from the same quantity of milk than at any other part of the season.

VEGETABLE INSTINCT. Dr. Walker mentions that an ash tree which had taken root on the top of a wall, was perceived suddenly to stop its growth for a while, having exhausted its supply of nutriment. Soon a rootlet was seen extending down the wall, which rapidly elongated until it reached and penetrated the soil at its base. As soon as this root became radicated, the tree commenced growing and attained a large size. Similar occurrences have been remarked in the history of other trees. If an elm or maple, or any other tree, be planted on sand near a rivulet, or pond, the evolution of roots will be most numerous on the side nearest the water.

LONGEVITY OF ONIONS. In the Belgian Horticulturist, it is stated that M. Houlton has communicated to the Medico-Botanic Society of Louviers the item that an onion which he had found in the hand of an Egyptian female mummy, that had been entombed more than 2000 years—on being planted in a garden, vegetated with great strength. It did not vary at all in appearance or qualities from our modern onion.

The Markets.

The prospect of excellent crops on both sides the Atlantic continues bright, and there are still in this country large supplies of breadstuffs of last year's growth.

In Liverpool the prices of flour declined from 48s to 33s 6d per bbl, between the middle of May and the 3d of July, equal to nearly one-third. In New York, the decline from June 4th to July 20, was still greater, from \$9.50 to \$5.—The price in New York has since rallied a little, and Genesee was sold July 28, at \$5.62. Corn, northern, in Boston, 75 cents.

WOOL. Quotations remain without change. The Middlebury Galaxy quotes a letter from Bennington county, saying:—"Four or five wool purchasers have been in this country for the last few days. They have paid from 32 to 40 cts. The best lots are not sold. They are held at 46 and 50 cts. Superior lots have sold for over 50."

The New York Journal of Commerce remarks:—

"The clip this season throughout the country is much superior, both in quality and cleanliness, to what it has been before, and is, on these accounts alone, worth two or three cents a pound more than last year's prices.

"The superior cleanliness is attributed in part to the cool and moist weather of last Spring, which it is said lessened the perspiration of the sheep. Last year there was much complaint, particularly by worsted manufacturers, about the tenderness of the wool, the fibres of which broke readily in the middle. This was attributed to poor or insufficient food during a part of the winter, at which the fibres had attained half their length. Whatever the reason was, it does not operate now, and the coming wools are remarkably handsome and strong."

PROSPECTS FOR PORK. A letter from Glasgow, June 10, in the Journal of Commerce, says:—

"Whilst traveling through Ireland, my attention was particularly called to the scarcity of swine. A few years back, and even up to the present year, every one, whether farmer or tenant, thought it necessary to own a drove of hogs; and it was always customary to see three or four gruntings either inside or about the door of every little mud-hut in the country; but this past year, having no potatoes to feed them with, nearly all have been sold or shipped off; and as the consumption of pork in England and Scotland is very great, and having formerly depended almost entirely on Ireland for supplies, they will next year want a very large quantity from some other source, and I suppose it can be sent better from the United States than any other country."

Mildew in the Grape.

The blight, or mildew, is the operation of *Fungi*, and the cause of the fungi is a *surplus of carbonic acid*, which gas would not exist as such, were there a sufficient supply of potash in the soil.

The grape-vine needs a large quantity of potash. Dr. Lee, a scientific gentleman of New York, says, that "a sugar maple, a grape-vine, an apple-tree, and potato plant, need a soil that abounds in potash." In the appendix of Liebig's great work on Agricultural Chemistry, you will find that while speaking of the mode of manuring grape-vines, it is said: "Under ordinary circumstances, manure containing potash must be used, otherwise the fertility of a soil will decrease. This is done in all wine countries." Again: "One thousand parts of the pruned branches contain fifty-six to sixty parts of pure potash."

We may now easily account for the fact mentioned by your correspondent, that "old vines are much more subject to mildew than young." They have exhausted the potash from the soil, and when their leaves absorb carbonic acid, the plant has no potash with which to form a healthy salt by union with it, and the diseased plant invites fungi.

A humid summer is favorable for the generation of carbonic acid, and hence the reason why "T." found his young vines attacked during such a season.—"T." is correct when he says, "That soap-suds is always beneficial, and can be used freely." The reason is, soap-suds contain potash. I should recommend very strongly the use of wood ashes about grape vines, particularly in "cold graperies; the vital power of the plant is not so strong, and consequently it has not the ability to expel the cause of the disease.—*Chemico, in Farmers' Cabinet.*

LONGEVITY OF THE DAMASK ROSE. There is a Rose-bush flourishing at the residence of A. Melville, near Bristol, Pa., known to be more than a hundred years old. In the year 1742, there was a kitchen built, which encroached on a corner of the garden, and the masons laid the corner stone with great care, saying "it was a pity to destroy so fine a bush." Since then it has never failed to produce a profusion of roses, shedding around the most delicate of all perfumes.

GLASS. It is difficult to foresee to what perfection the manufacture of glass may be brought, and to what purposes the article may yet be applied. The balance spring of a chronometer is now made of glass, as a substitute for steel, and possesses a greater degree of elasticity and a greater power of resisting the alternations of heat and cold. A chronometer with a glass balance spring was sent to the North Sea, and exposed to a competition with nine other chronometers, and the result of the experiment was a report in favor of the chronometer with the glass spring.

PAPER SHINGLES. Mr. Charles Humphreys, of Camden, New Jersey, has a prepared paper to take the place of wooden shingles for roofs. After a year's test of this description of shingle upon a small house at Kaighn's Point, it has been found to answer

all the purposes of the common shingle, and at a reduced cost.

LIME IN PLANTING TREES. Many object to planting trees either for ornament or use, in consequence of the numerous failures they experience. This, however, it should be recollected, is not a necessary result. With proper care, there is no more difficulty in transplanting than in planting and propagating from the seed or germ. In setting trees, we have found that they do best when taken up in the fall, about the time the leaves drop. Fruit and forest trees, shrubs, and perennial plants of all descriptions, may, at this season, be removed with perfect success. In setting, we usually put a small quantity of lime in the hole—about half a peck to a tree, mixing it thoroughly with the mould, in order that it may be easily accessible to the roots, which ramify in every direction in quest of food. An English publication says that an extensive plantation of trees has been formed within a few years, without the loss of a single tree, and has been effected simply by putting a small quantity of lime in the hole before depositing the tree. Four bushels are said to be amply sufficient for an acre. The effect of the lime is "to push on the growth of the plant in the first precarious state." There seems to have existed, at first, an apprehension that liming the tree would force it on prematurely, but this apprehension experience has demonstrated to have been perfectly groundless.

TO CLEANSE THE TEETH AND IMPROVE THE BREATH. To four ounces of fresh prepared water, add one drachm of Peruvian bark, and wash the teeth with this water in the morning and evening, before breakfast and after supper. It will effectually destroy the tartar on the teeth, and remove the offensive smell arising from those that are decayed.

TO REMOVE DUST OR MOTES FROM THE EYE. Farmers, as well as many other persons, are often so exposed in their labors as to get dust or motes in their eyes, and frequently suffer considerably before they can find any means of relief. The following simple remedy is almost always near at hand, and in most cases will prove effectual: Fill a cup or goblet with clear cold water quite to the brim, and place the eye in distress in such a position as to be completely within the water in the cup; then rapidly open and shut the eye a few times, and the dust or mote will be immediately washed away. If a cup or other vessel be not at hand, the eye may be placed in a spring or bucket of water.

RECIPE FOR MAKING BLACK INK. J. McLeish, of Malden, communicates the following recipe to the Olive Branch:—"Two quarts of rain water, one half lb. nutgalls, three ounces gum Senegal (arabic), three ounces sulphate of iron; soak the nutgalls in three quarters of the water; the gum arabic in one half of the remaining water warmed; the sulphate of iron in the other half; let them stand in the several vessels 48 hours, then mix them, and the ink is made. This recipe was received from Dr. Webster, Professor of Chemistry in Harvard University."

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. I.

WINDSOR, VT., SEPTEMBER, 1847.

No. 5.

THE SCHOOL JOURNAL.

For the School Journal.

Hints to Teachers.

HOW TO TEACH READING.

The old Method—Assign as a reading lesson two or three pages, and require each scholar to read a paragraph in turn, the teacher giving no instruction, except to pronounce a hard word, when a scholar stops to spell it out. This is very much like a teacher of music assigning half a dozen tunes as an evening's exercise, and requiring each pupil in succession to sing a tune solo, careful not to exercise his own lungs, except to sound an occasional note or difficult bar. The progress of the scholar must be obvious.

A better Way—Assign a short exercise, and require the scholars to study it so as to understand its meaning. Then, when the hour for attending to the exercise has arrived, let the teacher first read a sentence, giving the appropriate emphasis and modulation of voice, then require one of the class to read it in the same way. If he fails, show him in what respect, and let him repeat it. It may be necessary, in some cases, that he should repeat it several times, before he can give the right tone and inflection. Sometimes it will be best to drill the whole class on a single sentence; and at others to read several sentences, or the whole lesson. But whenever a sentence is read incorrectly, let the teacher point out the imperfection, or read the sentence himself first incorrectly, then correctly, to show the difference, and require the scholar to read it after him.

Special effort should be made to break up habits of bad and indistinct pronunciation. Some scholars will draw out their words with a nasal twang, and such a monotonous tone, that one syllable can scarcely be distinguished from another. They should be required to pronounce each word separately, in a full, round voice, which will soon eradicate this awkward habit.

There are many words which in common usage receive a wrong vowel sound, as *git*, *yis*, *sich*, *ware*, *air*, *jist*, for *get*, *yes*, *such*, *were*, *are*, *just*. Many have entirely discarded some consonants, when final, as *d*, *g*, and *t*, pronouncing *an*, *bole*, *mornin*, *kep*, for *and*, *bold*, *morning*, and *kept*. All such errors should be at once corrected by the teacher, and the scholars themselves should be encouraged to report, at the close of the exercise, any error which they may have noticed on the part of other members of the class.

To teach reading correctly, the teacher himself should be a good reader; and if he is deficient, his first and constant effort should be to secure his own improvement. This may be effected by reading aloud as frequently as possible, being careful to give such expression as it may be supposed the writer would if he were speaking instead of writing. A repetition of such sentences or paragraphs as are not fully understood at first, will be far more profitable than simply reading several pages in course. Let the teacher drill himself as he would his scholars, until he acquires the correct inflection and emphasis.

In regard to books, it is desirable that they should be progressive, and as soon as the scholar can read in one of the primary books, he should be advanced to one higher, that he may always have something to learn. If, in taking a new book, he hesitates at words with which he is not familiar, it is better that he should spell such words, and thus become familiar with their component parts, than that he should be told by his teacher.

Of the various books used as reading books, there is none better than the Bible. Aside from its high moral tone and its excellent rules for conduct on all occasions, it is written in a style so simple that it may be used for almost the first exercise in reading that a child attempts; at the same time it is so sublime that persons of the highest intellect may find pleasure in perusing it. Then there is an almost endless variety of reading,—the address—the rebuke—the apostrophe—the question and answer—the poetry—the history, affording exercise for every variety of expression and emphasis. In this respect it is unrivalled as a reading book, and should be used in every school where reading is taught. J. P. F.

For the School Journal.

Arithmetic.

No. II.

In the last number I spoke of the disadvantages under which students in arithmetic labored, from being confined by artificial rules to fixed forms, or unalterable positions of the various terms employed in calculations. There is one other consideration, however, on which I have not yet touched. I allude to the danger of the pupil forming a *habit* of resting *implicitly on authority*, by taking for granted that these artificial forms are right without the slightest examination, without calling for the why and the wherefore. This is one of the surest methods of training proselytes for the quack, the demagogue, and the fanatic. We have

by far too few investigating processes in our schools. We are by far too ready to believe a thing is right because it is *printed*. "As the twig is bent the tree's inclined." Accustom a child in early life to receive without examination all the dicta of his book or of his teacher, and in vain will you seek a close inquirer, an exact reasoner in after life. In mathematics, there should be *no reliance on authority*. "A rigid and clear demonstration should always be insisted on. The little word *why*, should be heard continually from the teacher.

But I am wandering from the purpose of this number, which was chiefly to show that the present methods of operating with numbers are *entirely too slow and prolix* for practical business. Perhaps nothing more is necessary here than to appeal to business men as to the fact; to inquire of them whether they have not been forced to *invent other methods* than those taught in the schools, and whether a similar course is not necessary for every young man who enters their counting-house or store. Ask a book-keeper in a bank if he still continues as in school, to add up his columns by taking a single figure at a time, or whether in balancing accounts he still places "the smaller number under the greater," "nits under units," &c., whether he still continues the tedious, verbose manner of subtracting, multiplying, and dividing, he learned in youth, and you will quickly be satisfied of the truth of my assertion, that the tedious methods of the schools are wholly unsuited for business. Now if this be so, why should they longer be persevered in! Is a counting-house, or bank, or store, a suitable place to *learn* the practice of arithmetic! Surely not. Surely every youth should acquire in *school* the surest and most rapid manner of managing figures, more especially in the elementary operations.

In the course of these Numbers, I propose to exhibit some of the rapid methods of which I have spoken. First, I shall show how the pupil, in summing up a column, may acquire the habit of throwing together four, five, or six figures at once. In subtracting, or in multiplying, or dividing by a *single figure*, I shall show how he may proceed as rapidly as the result can be written. And in multiplying by *more than one significant figure*, I shall point out the manner of *finding the complete product at once*, that is, without writing down the partial products. And finally, I shall show how to effect a saving of nearly half the number of figures in performing what is called *long Division*.

These rapid methods are not intended for the *first steps* in arithmetic. The common methods of operation, with some slight modifications, are well enough as an *introduction*. But a child must not be allowed to depend on the assistance of go-carts and of leading-strings, after his muscles have acquired strength.—Such a course would render him utterly helpless in mature age. No,—as soon as possible, he must step off independently of all artificial aids. In like manner, though it is proper to *begin* by adding single figures together, yet before a youth can be considered prepared for business, he must be accustomed to ascertain the amount of 5 or 6 figures arranged either horizontally or vertically, as rapidly as he can see and

pronounce the word *indefatigable* on a printed page. He must think little if any more of the individual figures of the one, than he does of the individual letters of the other.

T. H. P.

Pittsford, Aug., 1847.

For the School Journal.

Small Districts and the School Law.

MESSRS. EDITORS:—I do not write for the sake of controversy, but as your *Journal* is the vehicle to carry the thoughts of those interested in the welfare of Common Schools, and entertaining as I do, different views from those expressed by one of your contributors, I trust you will pardon me for writing the following article.

I notice in your fourth No. over the signature "L," a proposition to have a change made in the division of the public money among the several school districts, dividing the whole amount equally by the scholar in the same manner that the division of three-fourths is now made. The writer contends that "this would effectually remove the evils now arising from the multiplicity of districts," and "place all upon an equal footing."

The unavoidable disadvantages of those residing in *back districts*, among which are bad roads in winter, great distance from school, paucity of scholars, and the comparatively few to support schools, render the footing of all now unequal; and to strip from the weak for the benefit of the strong their equal share of one-fourth the public money, would necessarily increase the tax to such an extent that in many cases schools would not be supported at all, or if supported, they must be *cheap*, (deliver us from *cheap schools*!), thus placing good schools beyond the reach of many children as worthy and as susceptible of mental cultivation as those residing in thickly populated districts.

Much as I deprecate the multiplicity of districts and the evils arising therefrom, I cannot harbor the thought of having the privilege of school taken from a child in our land. If a change in Sec. 32, Chap. 18, R. S. is to be made, I would suggest, or rather second a suggestion already made, to have the money drawn by the scholars that actually attend school, and in proportion to their attendance, rather than by the number of children between the ages of 4 and 18 that may chance to be in the district on the first day of January.

By pursuing this course, I am of the opinion that a salutary influence would be exerted upon our common schools. In the first place, it would have a tendency to secure the punctual attendance of every scholar in the district; for if no purer motive prompted, pecuniary interest would induce many to interest themselves in the attendance of children at school, that now in relation to schools and their condition, seem wholly indifferent. When the interests of parents, and attendance of scholars is secured, we may consider the reformation of our schools begun.

In the second place, if the division of the public money were made as above proposed, it would be apparent to all residing in small districts that an extension of their territory and an acquisition of more schol-

ars would result in the diminution of taxes; hence measures would be taken, not to abolish schools, but to effect a union with other districts.

Pecuniary interest with many is the great incentive to action, and if our school law can be so amended that it shall be apparent to such that large schools and those well attended are the "most profitable," I say let us have the amendment. H.

For the School Journal.

Orange County School Convention.

The Teachers, Superintendents, and other friends of Education, met in county convention at Brookfield Centre, pursuant to the call of the County Superintendent, on Friday, Aug. 20, at 9 o'clock, A. M.

The convention was organized by appointing Dr. J. R. MORSE, President, JEHIEL CLAFLIN, and AARON CLEVELAND, Jr., Secretaries. Prayer by the Rev. Mr. Butterfield. The friends of Education from abroad were invited to participate in the deliberations of the convention.

The business committee then presented for the consideration of the meeting: 1. The subject of sustaining, as a useful and highly important educational publication in the State, the *School Journal*, published at Windsor. 2. The subject of Normal Schools and Teachers' Institutes. On the subject of sustaining an educational paper as an important medium of communication and thought, devoted particularly to that subject, remarks were made by Mr. Bishop of Windsor, Prof. A. C. Twining of Middlebury, Rev. D. Wild, Dr. J. R. Morse, J. M. Flint, and Jehiel Clafin.

Appointed a committee of five on resolutions, viz: J. M. Flint, T. P. Hubbard, Sylvander Hutchinson, Julius B. Lyman, Samuel Keith. Adjourned one hour.

Met pursuant to adjournment at 1 o'clock, P. M.

The meeting was then addressed by Mr. J. M. Flint, giving an historical view of the origin, object and progress of Normal Schools and Teachers' Institutes; followed by remarks on the same subject by Prof. A. C. Twining, Rev. T. P. Hubbard, Dr. J. R. Morse, Rev. E. W. Taylor, and J. Clafin. The following committee were appointed on the subject of Teachers' Institutes: Mr. R. S. Howard of Thetford, Mr. J. M. Flint of Randolph, and Rev. E. W. Taylor of Williamstown.

The committee on Resolutions then presented the following:

Resolved, That we regard the common school as sustaining high and important relations to the moral improvement of society, and the general welfare of our country.

Resolved, That we deem it of high importance that some instruction should be given in our common schools upon Physiology and the general laws of health.

Whereas, a difference of opinion exists in regard to the basis of apportionment of the public money among the districts, Therefore, *Resolved*, That this difference of opinion, arising as it does from a different construction of the Statute, demands that the provision

in question be so modified as to express its meaning in clear and unambiguous terms.

Resolved, That we concur with the suggestion of the State Superintendent of so modifying the law that in case a district fails of complying with the conditions named, only one third, or some other definite proportion of its distributive share, instead of the whole, should be withheld.

Resolved, That in view of the prevailing irregular attendance upon our schools, in order to secure greater punctuality and regularity, this convention recommend the alteration of the law, so that the public money be distributed according to the attendance of scholars rather than the number residing in the district.

Resolved, That we recommend the establishment of school libraries in each district in the State.

Resolved, That we recommend the establishment of a State Normal School, at the earliest practicable period.

Resolved, That we deem it necessary, that the Teachers of the common schools should annually enjoy the advantages of a Teachers' Institute.

Resolved, That the committee, raised on the subject of Teachers' Institutes, be directed to establish an Institute or Institutes the coming fall in such place or places, as in their judgment, will best accommodate the Teachers of the county; and that they be instructed to receive proposals of the terms upon which the several towns will furnish board, &c., and that immediate notice be given of the time and place of holding such school.

The convention was addressed by Rev. Mr. Clark, Rev. Mr. Parker, Hon. J. K. Parish, Dr. S. H. Smith, Samuel Fitte, Esq., and Abel Lyman, Esq. There was a very full attendance from different parts of the county and elsewhere, which told favorably for the interest felt on the subject of common schools.

There was some difference of opinion among some of the speakers on some of the topics embraced in the preceding Resolutions, which tended to awaken thought and inspire the mind with a deeper interest as it regards the best measures for the consummation of so noble an object.

At its close the convention passed the following resolution:

Resolved, That we tender our thanks to the people of this village for their hospitable entertainment, and to the society for the use of the house.

J. R. MORSE, President.

JEHIEL CLAFIN, }
AARON CLEVELAND, Jr., } Secretaries.

West Brookfield, Aug. 24, 1847.

CHILDREN IN TURKEY. It is mentioned by Miss Pardoe, that a beautiful feature in the character of the Turk is, reverence for their mother. All regard their mother as an oracle; she is consulted, confided in, listened to with respect or deference, honored to the latest hour, and remembered with affection and regard even beyond the grave. 'Wives may die,' say they, 'and we can replace them; children may perish, and others may be born to us; but who shall restore the mother when she passes away and is seen no more?'

Town Superintendents.

We have seen an extract from the annual report of one town Superintendent in Vermont, which indicated that the writer had some just view of the value of the opportunity given him at the Town Meeting, to bring the subject of common schools before his fellow citizens. The example we thought excellent. It is the best, and indeed the only opportunity that our law provides for, when the citizens as a body may be officially addressed respecting the education of children. There is no subject that better deserves to occupy a large part of the time devoted to the town meeting; and we hope that gentlemen now in office will prepare themselves to turn the opportunity to good account.

In New Hampshire, the Reports of the town committees, read at the annual town meetings, are expected, besides the usual statistics, to embrace an account of each school, with such remarks upon the excellencies or defects in its management, as they may deem just and proper; and also general remarks in regard to schools and education. These Reports are consequently often documents of great interest and value. The Appendix to the State Commissioner's First Report consists of extracts from them, to the amount of about 50 closely printed pages.

We copy a few paragraphs from the Rochester Report, relating to the advantages of

LARGE DISTRICTS.

"The Committee would further call your attention to the large number of districts in town, and the small number of scholars in many of the schools. It is true that in four or five districts, the largest number of scholars is 60 or more; although in only two has the largest average attendance the past year, equalled 50. In this village, where the number of scholars is about 160, and the average attendance, the present winter, 124, or 62 to each school, it was found necessary to re-organize the schools, bringing males and females together, in order to take advantage of a better system of classification, by which means, we think, even that large number are receiving competent instruction, under their present experienced and efficient teachers.

Every one can see that however small the school, there must be nearly the same number of classes, and the same routine to go through with; whence is manifest the economy of large schools.

In 18 of the schools in town the year past, the attendance, ranging from 8 to 30, is only, on the whole, 18 to each school, upon the average. Here then are all the expenses of keeping up 18 schools; as wages and board of teachers, fuel, school-houses, &c., to accomplish what less than one half the number, so far as the size of the schools is concerned, might have even better accomplished. It is true that distance will increase as the number of schools is diminished; but this evil will be far more than counterbalanced, even as regards those who feel it most, by the advantage of having larger schools, more competent and better paid teachers, and that excitement and competition, which naturally result from well-filled and well-conducted schools.

It must be difficult to command the services of a well qualified and enterprising teacher to instruct ten

or twelve small children; and even the best teacher will hardly succeed in preventing such a school from degenerating into dullness.

The work (of reducing the number of districts and remodeling school-houses) has long since commenced in some of the neighboring States. In Massachusetts, the Secretary of the Board of Education remarks in a recent Report, that he has reason to think more districts, within the previous year, have *doubled* their resources and their strength by union, than have pauperized themselves by division. Several large towns, he says, have abolished their districts, purchased all the school-houses, and assumed the legal responsibility, in their corporate capacity, of providing houses and teachers; thus introducing a system which will lead to equally good houses and equally good schools in all parts of the town."

Education as the First Element of Prosperity.

We copy the following from Dr. Bashnell's celebrated discourse entitled "Prosperity our Duty":—

"The great first problem at the root of all prosperity, is to produce the most condensed virtue and intellectual capacity possible; for if we may give to one man the capacity of three, then he will produce three times as much, without consuming any more. So if you can open as much of manhood in ten as in thirty people, (which is far from difficult) you will have only ten for expenditure and thirty for production.—Therefore, if you wish to make a city of ten thousand swell to a population of thirty thousand, the readiest and surest way is to make the ten thousand worth thirty thousand by the stimulus of right education. Neither need you be concerned to find out beforehand how the ten thousand will produce a three-fold value by their industry. They will determine that for themselves. Having so much of manhood in them as a creative power, it will be sure to appear in ways of its own. Nothing is better understood than that a dull family of mechanics, receiving low wages, will barely subsist, while a family that is quickened to inventiveness and skill, will command as much higher wages, as the values they produce are greater; and these will thrive in property, rise in character, become influential citizens, and act as stimulants to every kind of prosperity. An active, spirited, and scientific body of mechanics is a want everywhere, and especially here, where the mechanical interest has hitherto been greatly depressed. We take up a prejudice that manufactures and trades of handicraft are unfavorable to a state of public virtue, a prejudice that is refuted by facts on every side of us; for there is no purely manufacturing town in New England, that exhibits a waste of character and virtue, as deplorable as Hartford—actuated by this prejudice, we withhold our capital from enterprises that would quicken industry among us, and elevate its salutary hopes. And so, the prejudice we cherish creates a loss of virtue even worse than the loss it deprecates. A visible discouragement rests upon most of the trades among us, and the effect is seen in a want of life, progress, cultivation and character; consequently in want of that thrif

and hopefulness which are the springs of industrious virtue. One great mechanic rising into wealth and public note among us, would rectify many false impressions and breathe new life and courage into all the mechanic professions. I could speak of one such, that we had in prospect, a few years ago. I watched his opening genius with no little hope and admiration. But whether by our fault or not, I cannot say, he was scarcely ripe for action, before the better encouragement offered elsewhere drew him from us. Others, doubtless, we have among us now, who are proving their genius in a similar manner, though unknown to me. Many others we have, beyond all question, whose fine native capacity is rusting in dull obscurity and depression, never to be made conscious of itself, for want of a sufficient quickening stimulus in our schools to bring it into action. For it is not nature alone that makes the man. Neither is it enough for us, when once a promising talent is unfolded, to detain it, if possible, among us by adequate encouragements and aids to success. If we yielded all the encouragement to talent that we might, we should doubtless have more to encourage. But the living spark can be first kindled only by schools. It is the school that quickens curious thought, fills the mind with principles of science, and starts the inventive and creative powers into action. Therefore, I say, push your schools to the highest possible limit of perfection. Spare no pains, count no expense; for rely upon it, whatever you may do to make a city of men will go to make a city. Let every talent, every type of genius, in every child, be watched and nurtured by the city, as by a mother watching for the signs of promise in her sons."

Massachusetts.

THE EXHAUSTLESS FOUNTAIN OF BLESSINGS,—COMMON SCHOOLS.

For public, free education alone, including the direct outlay of money, and the interest on capital invested, Massachusetts expends, annually, more than a million of dollars. To support religious institutions for the worship of God and the salvation of men, she annually expends more than another million; and what she gives away, in the various forms of charity, far exceeds a third sum of equal magnitude. She explores the world for new objects of beneficence; and so deep and common is the feeling which expects and prompts all this, that she is gradually changing and ennobling the definition of a cardinal word in the language of morals,—doing what no king or court with all their authority, nor royal academy with all its sages and literary men, can do,—she is changing the meaning of *Charity* into *Duty*.

For the support of the poor, nine tenths of whose cost originate with foreigners or come from one prolific vice, intemperance, whose last convulsive energies she is now struggling to subdue, she annually pays more than three hundred thousand dollars; for the support and improvement of public highways, she pays a much larger sum; and within the last dozen years, she has invested a capital in railroads, within and without the State, of forty millions of dollars.

Whence come her means to give, with each returning year, more than a million of dollars to public education; more than another million to religion; and more than a third to ameliorate and succor the afflicted and the ignorant at home, and to bless, in distant lands, those who sit in the region and shadow of death? How does she support her poor, maintain her public ways, and contribute such vast sums for purposes of internal improvement, besides maintaining her immense transactions with every zone in the world?

Has she a vast domain? Her whole territory would not make a court-yard of respectable dimensions to stand in front of many of the states and territories belonging to the Union.

Does she draw revenues from conquered provinces or subjugated realms? She conquers nothing, she subdues nothing, but the great elemental forces of nature, which God gives freely, whenever and wherever they are asked for in the language of genius and science; and in regard to which no profusion or prodigality to one can diminish the bounty always ready for others.

Does she live by the toil of a race of serfs and vassals whom she holds in personal and hereditary bondage,—by one comprehensive and sovereign act of violence seizing upon both body and soul at once, and superseding the thousand acts of plunder which make up the life of a common robber? Every man who treads her sacred soil is free; all are free alike; and within her borders, for any purpose connected with human slavery, iron will not be welded into a fetter.

Has she rich mines of the precious metals? In all her coffers, there is not a drachm of silver or of gold which has not been obtained by the sweat of her brow or the vigor of her brain.

Has she magazines of mineral wealth imbedded in the earth, or are her soil and climate so spontaneously exuberant that she reaps luxuriant harvests from uncultivated fields? Alas! the orator has barbed his satire, by declaring her only natural productions to be granite and ice!

Whence, then, I again ask, comes her wealth?—I do not mean the gorgeous wealth which is displayed in the voluptuous and too often enervating residences of the affluent, but that *golden mean* of property,—such as Agar asked for in his perfect prayer,—which carries blessings in its train to thousands of householders; which spreads solid comfort and competence through the dwellings of the land; which furnishes the means of instruction, of social pleasures and refinement, to the citizens at large; which saves from the cruel temptations of penury. The families, scattered over her hills and along her valleys, have not merely a shelter from the inclemencies of the seasons, but the sanctuary of a home. Not only food, but books, are spread upon their tables. Her commonest houses have the means of hospitality; they have appliances for sickness, and resources laid up against accident and the infirmities of age. Whether in her rural districts or her populous towns, a wandering, native-born beggar is a prodigy, and the eleven millions of dollars deposited in her Savings' Institutions do not

more loudly proclaim the frugality and providence of the past, than they foretell the competence and enjoyments of the future.

One copious, exhaustless fountain supplies all this abundance. It is education,—the intellectual, moral, and religious education of the people. Having no other mines to work, Massachusetts has mined into the human intellect, and from its limitless resources, she has won more sustaining and enduring prosperity and happiness, than if she had been founded on a stratification of silver and gold, reaching deeper down than geology has yet penetrated. From her high religious convictions, she has learned that great lesson, —*to set a value upon time*. Regarding the faculties as the gift of God, she has felt bound both to use and to improve them. Mingling skill and intelligence with the daily occupations of life, she has made labor honorable; and, as a necessary consequence, idleness is disgraceful. Knowledge has been the ambition of her sons, and she has revered and venerated the purity and chastity of her matrons and her daughters. At the hearth-stone, at the family table, and at the family altar,—on all those occasions where the structure of the youthful character is *built up*, these sentiments of love for knowledge and of reverence for maidenly virtue have been *built in*; and there they stand, so wrought and mingled with the fibres of being, that none but God can tell which is nature and which is education; which we owe primarily to the grace of Heaven, and which to the cooperating wisdom of the institutions of men. Verily, verily, not as we ought, have we obeyed the laws of Jehovah, or imitated the divine example of the Savior; and yet, for such imperfect obedience and distant imitation as we have rendered, God has showered down manna from the heavens, and opened a rock whence flow living waters to gladden every thirsty place. He who studies the present or the historic character of Massachusetts, will see,—and he who studies it most profoundly will see most clearly,—that whatever of abundance, of intelligence, or of integrity, whatever of character at home or of renown abroad, she may possess,—all has been evolved from the enlightened, and at least partially Christianized mind, not of a few, but of the great masses of her people. They are not the result of outward riches or art brought around it, or laminated over it, but of an awakened inward force, working energetically outwards, and fashioning the most intractable circumstances to the dominion of its own desires and resolves; and this force has been awakened and its unspent energies replenished, more than from all things else, by her Common Schools.—*Hon. H. Mann's 10th Annual Report*.

The Cradle,

AND WHAT SHOULD BE DONE FOR ITS TENANTS.

First, the wants of the infant must be supplied at the very earliest symptoms of restlessness, that there may not be time for a feeling of impatience to suggest itself. Delay cannot teach patience till the child is old enough to be made to understand that there is a virtue in waiting patiently when delay is necessary.

Next, parents must learn a perfect command of their own tempers; this is indispensable.

Then none but persons first selected of naturally the sweetest dispositions, and then specially trained for the purpose should be admitted into the nurseries or infant school rooms. An infant should never see a frown, or any other manifestation of ungentle feeling, every face that approaches it should wear both a kindly and a cheerful expression, every tone of voice it hears should bear the like characteristics. Its heart should be *awakened* as early as possible by fond caresses, its little sufferings should be soothed and amused away with all the ingenuity of affection. In short, it should be kept as much as possible from having opportunities to form habits of fretfulness, opposition, or any other unamiable emotion, while it is yet too young to understand the grave look, the calm but steady demand of obedience, and the kind though irrevocable refusal of improper requests.

For the School Journal.

The Mayor of Boston and the President.

The following address of the Mayor of Boston to the President on his recent visit to New England, and the President's reply, are worthy of special notice, on account of the prominence with which the cause of common school education is regarded. The citizen of New England cannot appreciate the advantages which he enjoys in respect to these institutions, until he has visited other countries, and seen the vast contrast between the inhabitants of those and his own land. It is in New England peculiarly, that all classes of citizens are on an equality—that all enjoy a comfortable supply of the necessities of life—that morality and good order are cherished and that the distinctions in society, of the high and the low, the rich and the poor, are gradually fading away; and it is our common schools that are effecting this. *Knowledge is power*; and as the mass of the people become educated, they rise in the scale of society and assert the power to which they are entitled. As they become educated they are better prepared to engage successfully in the various pursuits of life, and to acquire that competence, if not wealth, which all are seeking; and they see and feel the importance of a healthy tone of public morals.

Massachusetts stands in the front rank of the States of the Union so far as regards intelligence, virtue, business enterprise, and general prosperity. In every good and noble undertaking her citizens never fail to act their part manfully, and their influence for good is brought to bear, not only on the rest of the United States, but upon the world. With a territory less than Vermont, she sustains a population nearly, if not quite, three times as large; a population which for energy, activity and judicious enterprise, are unsurpassed on the face of the globe. These traits of character, as well as the general prosperity of the State may be traced in the main, to the attention which is paid to the education of her youth. With a soil far more fertile, with a climate of unrivaled salubrity, and a population equally vigorous, Vermont, by a proper attention to the cause of common school education, may take a stand even in advance of her

sister State, and not only greatly advance the prosperity and happiness of the mass of her citizens, but throw out an extensive and salutary influence on other States and other countries. J.

The Mayor welcomed the President in the following address :

MR. PRESIDENT : In behalf of the citizens of Boston, I welcome the Chief Magistrate of the Union to the metropolis of Massachusetts. I welcome you as officially the representative of those, whose fathers stood by ours in the days of the Revolution, and of the twenty millions who now, with us, constitute this great confederacy. I welcome you as a statesman, to an acquaintance with the men, and to an examination of the institutions of New England. To an acquaintance with men whose industry, intelligence and enterprise, have clothed this barren soil with plenty, and made it the abode of art and science, of virtue and religion. To an examination of our institutions, particularly of our free schools, the peculiar institution of our land, by which, with the blessing of Heaven, we hope to continue a race of intelligent freemen, who will understand, maintain and transmit the liberties and virtues of their fathers to the end of time.— We receive you as we have your predecessors in office, and ask that you will grant to us, as they did, the honor of considering you the guest of the city during your stay among us.

To this address, the President responded briefly and emphatically as follows :

MR. MAYOR : For this manifestation of welcome from the capital of New England, I feel the most ardent sensations of gratitude. In the history of my country, I have read of your free institutions of learning,—your common schools,—and it is with no ordinary feelings of pleasure that I pay my first visit to this great city, the ground which those noble institutions have hallowed, as peculiarly their own. With you, sir, I agree, that upon the intelligence and virtue of the people depends the perpetuity of the free institutions under which we live; and I hope that during my short sojourn among you, I may become acquainted with many of those excellent men who have made your city so celebrated for its benevolence and liberality.

Teachers' Institutes.

" This is a short School for the special training of teachers, kept usually from three to four weeks in Spring and Autumn, preparatory to the Summer and Winter Schools. An accomplished master of the art of teaching is employed; persons proposing to teach during the following season, are invited to meet at some convenient place within the county; a model School is collected from the vicinity; and the theory of School-keeping is discussed in its various branches, and exemplified by the future teachers in rotation. In this way the best lights of experience are thrown upon the subject, and any peculiar felicity of manner, that may happen to be possessed by one, is communicated to the rest. During the continuance of the Institute, occasional lectures are delivered by distinguished educationists; and at the close a public examination is had, with a view to exhibit the results

to the community around. The success of the experiment thus far more than answers the most sanguine hopes of its friends; and I am induced to think, from all accounts, that no single means adopted by us for the supply of competent teachers, promises so much. Institutes have been in active and efficient operation the last year in Cheshire and Hillsborough Counties; and preliminary measures have been adopted for introducing them into Rockingham and Strafford. I shall be greatly disappointed, if the Act of the last Legislature, authorizing the towns to raise a small sum, annually, for the support of one Institute in each County, does not prove one of the most useful and satisfactory measures, at any time adopted for the improvement of the Common Schools. I trust, that the experience of the Southern Counties will encourage all the Counties of the State to take early measures for securing to themselves the same advantages. The expense is trifling; and the benefits incalculable. A single thought suggested to a reflecting teacher, may change his whole style of discipline. There are often, abundant information and excellent dispositions in persons, who, for want of an hour's instruction, hardly know how to open and organize a School. Particular individuals, by accident, or some happy thought, have acquired a tact in teaching or governing, which instead of being confined to themselves, may by means of these Institutions for mutual improvement, be communicated to a numerous circle. Upon subjects on which we have any thing to learn, the true way is to agitate, discuss, compare ideas, consult; it is impossible but that bright minds earnestly bent on improvement will be instructed and stimulated by mutual intercourse. A public sentiment begins to be formed on the subject; the standard of merit is raised; a spirit of professional ambition is excited; and it cannot be long before the best results will be realized in an increasing popular intelligence and an elevated general morality."—*Prof. Haddock's Report.*

PLANE STORY. A planer of planes was once planning a plane when the plane with which he was planning was plainly discovered not to be a plane, but so uneven and rough that he could never make plain what was made for a plane. The planer of planes then complained with plaintive complaints that his plain neighbor, to whom he had some time before loaned his plane, had misused his plane and made it unplain. This plainly appeared not to be plain dealing in his neighbor, who had he been a plain upright man would have plainly told him when he returned the plane to the planer of planes, that he had accidentally injured the plane while planning something that he wished to make plane. It now appearing plain to the planer of planes, that the plane with which he had been planning what he intended for a plane would never make it plane; he took another plane he had been using to plain out the new plane; and, after planing that plain, he was able smoothly to plane the new plane.

Let no one complain that it is plain that the word plane is so often used that the sense is plain; for on examination it will plainly appear that the meaning is plain.

"BOSTON BOYS." A pleasing incident has recently been communicated to us by one of our grammar masters, of a nature so pleasant in itself, and so creditable to the parties, that, though we do not feel at liberty to mention names, we cannot forbear giving publicity to the facts. Two years since, a son of one of our merchants graduated from a grammar school, one of its first scholars, and a recipient of a Franklin medal. A younger brother has just finished his studies at the same school, leaving it at the close of the last month, and following in the footsteps of his elder brother, graduating from the school the first, and, of course a Franklin medal scholar. Among his classmates was a boy of poor and Irish parentage. They were competitors for the highest rank, and the son of the merchant was the successful one—though both medal scholars. Although placed in different social positions, and not likely to meet after leaving the school, the boys have evinced much interest in each other's welfare, and have ever been on friendly terms, as is shown by the generous and thoughtful interest evinced by the merchant's son in his less favored rival. Since the exhibition, the master of the school has received a letter signed by the boy and his elder brother, enclosing fifty dollars, with the request that it may be expended in such a manner as may be most likely to be useful and advantageous to the Irish lad. The kindness of the act—the delicate and modest manner in which it is done, and the evident and thoughtful solicitude of these boys to aid, without offending the feelings of their less favored school-mate, combine to make this one of those bright spots, one of those gratifying, however trivial incidents, that, in spite of ourselves, compel us to think less unfavorably, after all, of human nature; and to admit, amid all the less pleasing scenes we are daily compelled to witness, there is still some good left in the human heart.

—Atlas.

DEPLORABLE. The Superintendent of public schools in Kentucky stated, in a speech at Bowling Green, in that State, that in two counties, not far distant from that place, it was ascertained by an examination in the Clerk's office, that more than one-half of the males who had married in those counties within the year 1843, and had executed their marriage bonds, had made their mark, instead of signing their names; and that also one-half of their scurries in those bonds were unable to write.

MY DEAR YOUNG FRIENDS.—The darkness of the night has passed away. The shadows are gone, and bright Aurora gilds the eastern skies. I am an old man, having existed ever since the creation of the world. I have for thousands of years, paid a daily visit to this country. All animated nature hails my approach with joy. The feathered songsters favor me with their first strain. When I approach, everything seems refreshed and gay. My breath is sweet and pleasant, diffusing a balmy fragrance through the air. I have a store of valuable gifts, which I impart to those who favor me with an early visit. I possess a renovating draught, that will enable those who take it to accomplish with ease the duties of the day. But,

alas! my dear young friends, how many of you never see me! I have eagle's wings, and quickly fly away; my stay is of short duration. I have to complain of your negligence in not visiting me oftener. You will allow me to pass away before you will arise from your downy beds. Up, then! awake, ye drowsy ones, and pay an early visit to a friend who will reward you for your trouble, and believe me to be,

Yours, sincerely,
EARLY MORNING.

Every man of eminence who writes his own biography, explicitly avows that he is unconscious of any other reason for having attained proficiency in his pursuits than *intense application*. Supposing a fair share of natural endowments to be given, an ardent desire to excel will certainly overcome many difficulties. In the autobiography of the late Mr. Abraham Raimbach, an eminent engraver in London, just published, we find an additional corroboration of this view. "All true excellence in art is, in my humble opinion, to be chiefly attributed to an early conviction of the inadequacy of all means of improvement in comparison with that of *self-acquired knowledge*."

They have an excellent way, says a Massachusetts paper, of keeping the boys at school in Wicasset. The select men have ordered the arrest of all boys who may be loitering around the streets, during school hours, saying that they must either attend school or devote their time with diligence to some lawful employment.

A GENIUS. The Mercer (Pennsylvania) Luminary gives an account of a person who came to their office some weeks since, worked three days, went home, constructed a press, procured a font of second hand type, and returned last week with a *proof sheet of the first form of a pamphlet*. What will become of the trade?

"NO TIME TO READ." We have often encountered men who profess to believe they have "no time to read." Now we think of it, they have always been men of *one* character, the points of which are easily summed up. Nine times out of ten, they are men who have never found time to confer any substantial advantage either upon their country, their families, or themselves. They generally have time to go to elections, attend public barbecues, camp-meetings, sales, and singing schools, but they have "no time to read." They frequently spend whole days in gossiping, tipping, and swapping horses, at the cross roads or county town, but they "have no time to read." They sometimes lose a day in asking advice of a neighbor—sometimes a day in picking up the news, the prices current, and the exchanges—but these men never have any "time to read." They have time to hunt, to fish, to fiddle, to drink, to "do nothing," but "no time to read." Such men usually have uneducated children, unimproved farms, and unhappy firesides! They have no energy, no spirit for improvement, no love of knowledge; they live "unknowing and unknown," and often die unwept and unregretted.—*Southern Cultivator*.

THE AGRICULTURIST.

For the Vermont Agriculturist.

Preservation of Manures.

The tillage lands of Vermont cannot be improved without manure, and the frugal and thriving farmer will be just as careful to preserve and increase the amount of this essential article, as he will to secure and preserve the crops which are the produce of his farm. Hence it becomes an important question with every farmer, how he may most effectually increase the quantity and preserve the quality of his manure. Many farmers have not the means of doing all that is desirable in this respect, yet all can do something,—and I will state a few simple things which I have done for this purpose, and which all can do.

1. Prepare the barn-yard. The best way is to have it dishing towards the centre, the sides of the yard being but slightly inclined, affording a good opportunity for the cattle to stand or lie, while the wash is all turned towards the centre, the centre itself being more deeply excavated, to receive the manure.—If the soil is loose sand or gravel, this excavation should be lined with clay four or five inches thick.—If the excavation cannot be conveniently made in the centre, it may be made in some other part of the yard, the earth removed being so placed as make the whole yard gently descending to such excavation. Almost any yard could be prepared in this way by two hands and a team with a plow and scraper in half a day; and the judicious farmer will not simply say "the plan is very good," but he will not suffer two weeks to pass by without adopting it, if he has not already done so.

2. Next as to the use of the yard. This excavation should be covered with a coating of muck, or soil, or sods, or straw, or anything which will serve to absorb or soak up the liquid manure. A pile of such material should also be placed near the excavation, and during the summer, the droppings of the cows should be gathered every morning and thrown in, and then covered with a coating of the muck or other substance procured for the purpose. If a slight coating of the muck is spread over the whole yard, and scraped into the excavation once in two or three weeks, it would absorb and preserve a large portion of the urine. It may be objected that this takes too much time. Some time is required, it is true, but labor thus expended is the most profitable done on the farm.

3. To prevent the manure from being washed, the water from the eaves of the barns and sheds should be conveyed out of the yard by eaves-troughs. These may be made at little expense, of boards, the inside only being planed. If the wash of any land adjoining the yard would naturally flow into it, that side of the yard should be guarded against such wash.

4. When muck can be obtained, it can generally be procured most economically in the winter. Larger loads can then be drawn, labor is cheaper, the swamps or muck beds are more accessible, and the farmer who improves that season in getting a pile of 50 or

100 loads of this article in his yards, will find it as valuable as so much clear barn-yard manure; as by composting it with the manure he saves much of the latter, which would otherwise be lost, and for some soils the compost is actually better than the clear manure.

5. Much has been said and written in regard to the saving of the liquid manure of stables. Our seasons and the price of labor are objections to the plan of using tanks and cisterns, and of spreading it on the land in a liquid form. It is therefore far preferable to save it by the use of absorbents. For this purpose, the same substances which are used in the yard, may be made available; but they should be placed in a dry state under some shed, where they will be of convenient access in the winter. It should be the first object of the farmer or at least one of the first, to have a cellar under his stable. A coating of muck, &c., should be spread over the bottom of it in the fall, and it should be placed around the sides from time to time during the winter. Then by leaving the planks of the stable floor half an inch apart, almost the whole of the liquid part of the manure is saved,—the solid parts are preserved in a better state, and the labor of cleaning the stable is less, when the manure is dropped through a scuttle in the floor, than when it is thrown out of a window.

6. The hog-yard should also receive the attention of the farmer, and be prepared in the same way as the barn-yard. Muck or soil should be thrown in, say one or two loads a week for half a dozen hogs, and as it is deposited sprinkle in with it two or three quarts of corn. This will induce the hogs to root it over and mix it with their own droppings, and in this way half a dozen hogs will make from thirty to forty loads of manure in a season, of the very best quality for corn. He who raises hogs for the pork alone, realizes only half the profit from them which he may do. The profit on their labor is equal to the profit on their carcasses.

7. The manure of the poultry should also be saved for two reasons. First, a neat farmer will not have his fowls roosting all over his premises, and soiling his carriages, farming tools and floors, with their filth. Second, their manure if preserved, is of prime value in the garden—very nearly equal to guano. For vines, a quart placed in a hill and slightly covered before dropping the seeds, will produce more effect than three times that amount of barn-yard manure.* To preserve it, fix a roost in a warm shed, and place under it a box made of two boards. The box or trough may be sustained two or three feet below the roost, by arms or boards nailed on the posts of the shed and projecting under it.

I presume many farmers have adopted the plans I have suggested, essentially; but there are multitudes who have not done it, and perhaps never will, until the importance of such arrangements are made manifest to them, by the superior thrift of their neighbors. A wise man however, will attend to such things in

* The moth in onions may also be effectually prevented by watering them every two weeks with a decoction of this manure. Their growth will also be much increased thereby.

season, and not suffer procrastination to steal away the very prime of his life before he begins to make the improvements which are essential to his success as a farmer.

AGRICOLA.

Saving Seeds.

As long ago as 1805, the Rev. Dr. Freeman communicated to the Trustees of the Massachusetts Agricultural Society the following statements:—

"To ascertain whether the ripening of seeds can be forwarded by sowing those which are the earliest ripe, I have made experiments, all of which have been successful, on several different sorts. It will be sufficient to mention one only.

In the year 1801, I planted the case-knife bean.—The pods first formed, which are generally those nearest the root, were reserved; and, when about the quantity of a peck were fully ripe, they were gathered on the same day. The largest and fairest of the seeds were planted the next year, and the first formed pods reserved as before. The same method has been pursued without any variation, till the present year; by means of which, while the bean has not degenerated in its quality, the ripening of the seeds has been forwarded twenty-six days, as will appear from the following table:

Planted.	Gathered.	No. of days.
1801, May 20,	Sept. 9,	112
1802, " 11,	Aug. 21,	102
1803, " 10,	Aug. 8,	90
1804, " 8,	Aug. 4,	88
1805, " 6,	July 31,	86

The first column denotes the time of planting the seeds; the second that of gathering the seeds which were first ripe; and the third the number of days which elapsed between the time of planting and the time of gathering."

Here is a gain of nearly a month. But these experiments show the influence of selection in regard to early maturity only; in which respect the same principle obtains in regard to melons, squashes, corn, potatoes, &c. A writer in the *Oliver Branch* states that, by pursuing this course of selection a few years, he has changed the habit of a late autumnal squash, so that it ripens in summer.

But in the same way crops may be improved in any other respect as well as in early maturity. You have only to persevere in selecting seeds distinguished for those qualities which you wish to improve. Hence appears the importance to the cultivator, of saving his own seed. When seed is cultivated for the market, the whole crop usually goes in a mass; and the best you can expect is, to get part of a good crop. No adequate attention to particular qualities can be reasonably looked for. For this one must rely on himself or a careful neighbor.

Seedling Grapes.

Notwithstanding the comparatively little attention that has been paid to the production of new varieties of fruit in this country, it is remarkable that many, if not most, of our best kinds are of American origin. This is the case particularly in regard to apples,

peaches, and plums. And enough has been done with pears, cherries, and strawberries, to prove that we may, if we please, compete successfully with any other country in the production of superior new kinds.

Why may we not expect the like success with at least all kinds of fruit that are natives of this country? Why may we not, especially, obtain from our native stock of grapes, some kinds adapted to our climate, and combining all the excellent qualities which belong to that delicious fruit?

Some experiments have been tried, it is true, that have not resulted entirely to the satisfaction of cultivators. Out of hundreds of seedlings, in some cases, but very few have been found tolerable. But have not the experimenters been too easily discouraged? The doctrine that Van Mons made the basis of his celebrated experiments with the pear, and which resulted in the production of so many delicious new varieties, was this:—*That fruits are improved by a proper cultivation of seedlings for successive generations.* When he got a seedling of any tolerable promise, he planted its first seeds; and so on, using the *first seeds of the best seedlings.* And he found that after a few generations nearly all the seedlings might be relied on to produce superior fruit.

We should confidently expect a similar result in regard to grapes. By making the generations succeed each other as rapidly as possible, we see no reason why the same law that gave Van Mons his pears, may not be relied on to give us grapes, adapted to the climate of Vermont, and good enough for any man's table. We mention the subject now in the hope that cultivators who have leisure for such experiments, and especially any who may have seedlings coming into bearing, may be induced to persevere, and carry on their experiments through several generations of the vine. These generations may be made short in comparison with those of the pear, and to succeed would be to confer on the community a blessing indeed.

Selection of Apples.

We copy from the *Massachusetts Eagle* some good remarks on the selection of young trees for transplanting. What is said of transporting trees from a more southern climate deserves special attention. Cultivators in Vermont cannot safely depend to much extent on trees brought from the south or from the sea coast.

Another point to be regarded in the selection of varieties, is, to choose such as come early into bearing. Of two kinds equally good otherwise, one may be relied on to produce many bushels before the other will produce a peck.

If intended for market, it is better to rely on a very few varieties. It is far better to send to market 50 barrels of Baldwins, than 50 barrels of 20 different kinds, even if equally good. The lot can be disposed of more readily, with less trouble, and at a uniform price. Mr. Webster set twelve acres with Baldwins at his farm in Marshfield last spring. Mr. Pell of New York depends on his Newark Pippins. Other experienced cultivators, who know the market well, find it best to have large orchards of a single kind.

Especially is it necessary, in the present state of fruit culture among us, to be cautious in regard to new and untried kinds. There is danger of being led (with the best intentions, it may be, on the part of the seller,) to procure varieties that have no claim to extensive cultivation, and have only been introduced into a nursery because they happened to strike the fancy of some inexperienced individual or two. If one wishes to experiment with new kinds, very well; but he that is selecting young trees with a view to profit from the sale of their fruit, should take only those that are already well known in market.

Culture of Strawberries.

It is said by those who have experience that thorough culture is the cheapest,—producing the most, as well as the largest and best fruit, by the same amount of labor. By thorough culture is meant, not only the proper preparation and planting of the beds, and manuring, but frequent trimming and renewal.—A successful cultivator in Salem takes but a single crop from his plantations,—planting every spring for the next year's crop.

Mr. Downing, in the *Horticulturist*, recommends the following plan:

Pistillate.	Stam.	Pistillate.	Stam.	Pistillate.
• • • • •	†	• • • • •	†	• • • • •
• • • • •	†	• • • • •	†	• • • • •
• • • • •	†	• • • • •	†	• • • • •
• • • • •	†	• • • • •	†	• • • • •

In this * represents pistillate plants, such as *Hovey's Seedling*, occupying beds four feet wide; † represents staminate plants, like the *Virginia Scarlet*, on beds one foot wide,—with walks on each side. Cultivators now agree that the best crops are obtained by thus using pistillate plants for the main crop, with enough staminates near by to fertilize them. The walks should be kept clean, and the runners cut off, and manure dug in, every season. Thus managed, the beds, it is said, will do well for several years.—Early in September is a good time to transplant.

Prepare the soil by deep digging and thorough pulverization, with plenty of well rotted manure. Chip manure is excellent, if well rotted.

The *Virginia Scarlet* will give good crops of excellent fruit when cultivated alone; as will many other kinds, among which the *Boston Pine*, a new variety, is highly recommended.

MORE HELP TO THE FARMER. Sulphuric acid, invaluable for many purposes, is coming into common use among English farmers. Some buy whole cartloads of it. The old price was eight cents per pound, but it can now be had in Liverpool for three—platinum receivers, though they cost \$5,000, effecting a great saving, when substituted for glass in the manufacture. The production of crops removes the phosphate of lime from the soil—bones dissolved in sulphuric acid produce this phosphate, and the phosphoric acid so produced has been brought to bear upon the land with the most beneficial effects.

Professor Liebig gives it as his opinion, that the commercial prosperity of a country may be estimated

by the quantities of sulphuric acid it consumes; and Mr. Pusey, M. D. declared, in a lecture on it, last month, that he considers it no inadequate criterion of the degree of civilization. In Wiley & Putnam's new edition of Liebig, page 184, it is remarked that Ingenhouse proposed diluted sulphuric acid as a means of increasing the fertility of soil. Sprinkled in calcareous soils gypsum is formed, but this is a costly manure—100 lbs. of concentrated sulphuric acid diluted with 1000 lbs. of water, being equivalent only to 176 lbs. of gypsum.

The Striped Bug.

An item in the directions of our correspondent "*Agricola*" for saving manures, reminds us of the following. It is "after the fair" for this year, but will be easily remembered:—

Take half a peck of manure from the hen-roost, put it in an old tub or box, and add four gallons of water. In twenty-four hours, by stirring it two or three times, it will be ready for use. Put half a pint of this liquid upon a hill of melons or squashes, and the striped bugs will certainly vanish. At least we have found it so on repeated trials, for several successive seasons. The bugs may not every one vanish on the first trial; and they may re-appear; but we have never had a vine injured after this application. Besides protecting the vines, this liquid is the very best of manures, and the application may be frequently repeated, wetting the leaves if a stray bug or two should linger on them, without apprehending any harm. The manure-tub will bear to be filled up several times with fresh water.

N. B. The only objection to this plan is made by the olfactory nerves.

HEREFORDS AND AYRSHIRES. The arrival of the Hereford Cattle lately purchased by the Messrs. Bingham of Cornwall, has drawn forth a challenge from Mr. Wight Chapman of Weybridge, to match five half blood Ayrshires against the same number of Herefords, for butter-making. Mr. Chapman's stock, we believe, was procured from Mr. Cushing of Watertown, Mass.

NURSERIES. We learn that nurseries are increasing in every direction; so much the better. It is time to cut down many of our old orchards and begin on better plans. We need not fear being overstocked with winter fruit, for our market is unlimited; we send apples to Europe, to the East Indies, to the West Indies, and to South America. Our northern are preferred to those of the Middle States, for they can be longer kept. What can we do better than to supply the world with the fruits that are adapted to our climate? If we cannot compete with the West in the articles of corn and grain, we can raise better apples than any of them and make a more ready market.

We are pleased that many farmers are now aware that one apple-tree in tilled land, or in a hog-yard, is worth half a dozen standing in unbroken sward land.—*Massachusetts Ploughman.*

From the Massachusetts Eagle.

Selecting Fruit Trees, and Varieties of Fruit.

In selecting fruit trees simply, without regard to the quality of the fruit, the following rules may be useful.

1st. Be careful to obtain such as have been worked (budded or grafted) on thrifty nursery stocks, and not upon suckers from other trees, which are for the most part, either imperfect or diseased, nor upon such accidental seedlings of the farm, as, by the neglect and abuse to which they have been subject, are effectually stunted.

2d. Make it an object to secure trees that have been reared in at least as cold a climate and soil as those in which it is intended to give them their future location. As a general rule, the smaller the change to which a tree is subjected in its transplantation, the better, but to the general rule must be made the following double exception, viz : that a change from a less to a more favorable soil, or from a more to a less rigorous climate, will ever be in favor of the transplanted tree. All experience proves it hazardous transferring trees (to any considerable distance) from the south to the north, but a safe and successful practice to remove them in the opposite direction.

3d. The size of the tree to be transplanted may very properly claim a share of the planter's consideration. Trees of a large size are somewhat desirable, when they can be had near by, and receive that degree of attention which is requisite in taking them up and re-establishing them. But for ordinary office purposes, the best size is that of trees three or four years old from the but or graft, say six to eight feet high. For sheltered locations, however, still smaller trees will answer well, (and are often preferred) as their roots are less injured by removal and they are more likely to form an immediate attachment to the soil, to grow off thriftily at once, and in the end to make more healthy trees.

4th. The form of the tree is another item of importance, as it serves to indicate, in some degree, its relative value. Whether the stem be perfectly straight, or somewhat crooked, matters very little; but a stout, large stem, (especially near the ground,) betokens a healthy system of roots, and is much regarded by experienced planters. A well spread top, if the tree be large enough to have formed one, is also to be chosen, since it represents, in miniature, its full-grown head.

5th. The tree should be in a generally thrifty condition—free from bruises and wounds—the bark smooth, clear and full—and its whole appearance indicative of health and vigor.

In the matter of selecting varieties of fruit, few general rules can be given, since men will be chiefly governed by taste, and taste has very small respect for laws. There are however certain obvious principles which from regard to economy, will be adopted by all judicious planters in making such selection.—Some of these principles are as follows :

1st. In accordance with the very sensible notion of the gentleman who said in relation to this subject,

'I prefer a peach to a pumpkin,' every considerate man will make it his primary object to secure well-flavored fruits,—since a deficiency in this respect cannot be compensated by any other excellence, however great.

2d. It being very desirable to have a supply of good fruit at all times, it is of course important to select such varieties as will succeed each other in their time of ripening, the whole year round.

3d. The best apple for eating out of the hand not being the best for culinary purposes, it is obviously necessary to a perfect collection that it embrace the best varieties for the kitchen, as well as for the dessert.

4th. If fruits are to be cultivated for the market, it is proper to give some attention to the figure, size and color of the varieties,—since the price of an apple, as well as of every thing else is more or less affected by its external appearance.

5th. The successful and profitable cultivation of any choice variety depending much on its relative hardiness and productiveness, it becomes the planter to select only such varieties as are known to be adapted to his latitude, and to avoid all such as have the reputation of being shy bearers.

A. FOOT.

Rotation of Crops.

There is living in Northampton county, Pennsylvania, on the banks of the Lehigh, a very aged man, whose success in falling upon a system of rotation, by which he could obtain the greatest possible yield of wheat, in a given term of years, has caused it to be generally adopted in that fertile region. It is called Sheimer's system, after the discoverer, Jacob Sheimer, whom I had the curiosity to visit at his most substantial homestead some years ago, and from whom I obtained the following account :

When a young man, with a large family of children growing up around him, and dependent on him for support, he plainly perceived that under the rude practice then existing he would not be able to maintain them. He had thought over his difficulties while following his plow, and at length he determined upon his plan, which, followed up without faltering, has conducted him in the decline of life to ease and affluence.

When I saw him he had resigned the active duties of his farm to his son, who was following in his footsteps; after having himself practised his system of rotation for thirty-five years, with a constant improvement in the quality of his land, which indeed had the unmistakable stamp of fertility upon it.

The farm contained one hundred acres, which was divided as nearly as possible into eight fields of twelve and a half acres; each of which was carried through an eight years' rotation.

Commencing with a fallow field, he

1st year. Manured and limed, plowed three times, in May, June and August; harrowed and seeded one bushel and three pecks per acre of wheat, which was plowed under.

2d. Clover seed sown on wheat in the spring, six quarts to the acre, which was pastured after harvest.

3d. Pastured clover in the Spring, one bushel per acre; cut in June, and ploughed under second crop, and seeded again with wheat.

4th. Wheat same as No. 2.

5th. Pastured early in the season, and plowed under second crop in August, and sowed wheat.

6th. Wheat again, and rye sowed on stubble.

7th. Sowed clover seed in the Spring on rye.

8th. Plowed under the clover sod and planted corn; and next season recommenced.

It will be observed that there were every year three fields in wheat, one with rye, one with corn, two with clover, and one fallow. The produce had one season reached as high as 1,400 bushels of wheat, 600 bushels of corn, and 400 bushels of rye.—*Hon. Morris Longstreth's Address.*

The above is another illustration of the fact that the farmer is apt to succeed when he *understands* what he is about. This rotation may not be the best, even for Mr. Sheimer's farm; but then it is a good one for that farm, as the result proves; and adherence to it brought all his farm operations into such a compass that he became soon perfectly familiar with the whole process.

Ayrshire Cows.

While on a visit to Boston a few years since, we had the pleasure of viewing the beautiful Ayrshire Cows imported by Mr. Cushing, as well as those more recently imported by Captain George Randall, of New Bedford. Being desirous of obtaining the opinion of Mr. David Haggerston, the able and efficient manager of Mr. Cushing's farm, we addressed him on the subject, and the following is the reply:

"I will, with pleasure, give you my experience in the Ayrshire stock. As milkers they are quite equal to the best native stock that I have ever seen, and for years we procured the best native cows that could be found, without regard to price; for some of which we paid as high as two hundred dollars, which was not for fancy, but was considered the actual worth of the animals for their milking qualities, but have found at all times of the year, when the cows were in full milk, that the Ayrshires were the best, and when we have kept an account of milk given for a length of time from a native cow and an Ayrshire, the Ayrshire has invariably held out the best. This I consider one of their grand qualities. Another good quality they have, the progeny are as good as the parents, in all cases. Our Ayrshire heifers have all proved as good for milk as their mothers, and this has also been the case with those which Mr. Cushing has given away near home. I think I know at least twenty of them that last year fully developed their milking qualities, and their owners all say they are the best cows that they have ever owned; and many of them have milk farms with large stocks of cows.

As our bulls have always been free to any one, they have been freely used, I assure you, and it is acknowledged by the farmers that their young stock is very much improved; but whenever the improvement has been visible in the first cross, it has always

been evident that the cow has had more or less improved blood in her.

After taking all things into consideration, I have come to this positive conclusion, that the Ayrshire stock, for milkers, are superior to the natives;

1st. In all cases of trial between natives and Ayrshire stock, as to quantity and quality of milk for making butter, that have come under my observation, the Ayrshire stock has proved to be best.

2d. The Ayrshires are more docile, and much less apt to be unruly, in regard to fence breaking.

3d. The Ayrshires are equally hardy and healthy, and will give more milk on short feed than the natives.

4th. The Ayrshires are decidedly the handsomest animals, and the most pleasing to the eye.

5th. In breeding from the Ayrshires, you can depend upon the young stock. I have found them in all cases equal to their parents; I mean the heifers, as we only raised one full-blooded bull, and he was poisoned when 2-2 years old, and was then the handsomest animal I ever saw, with handsomer points than his sire.

6th. If for beef, the Ayrshires are much easier and quicker fattened."—*Worcester Spy.*

SALT AND ASHES FOR STOCK. Some years since I saw it recommended in an agricultural journal to mix salt with ashes for stock. Having tested the utility of the practice, I am now prepared to speak favorably of it, and form a firm conviction that stock, of all descriptions, are essentially benefitted thereby. My cows, workhorses and young cattle, as well as sheep, have been regularly supplied with it as often as once a week for two years, and notwithstanding the feed in the pastures, during a part of the grazing period of both seasons, was quite short in consequence of the prevalence of severe drought, the stock generally has remained in excellent condition; much better, indeed, than I have seen them for years.

Sheep, especially, are extremely fond of it, preferring it to fine salt, and partaking of it with almost the same avidity with which, when hungry, they devour their meal or grain. As to the general efficacy of the practice, and its tendency as respects the health of the stock, I will merely say in conclusion, that I am acquainted with several discriminating farmers who have made the same trial, and that in no instance with which I am familiar, or which has fallen under our direct personal observation, has it been attended with other than the best results. The proportions in which the ingredients should be given, are one part salt to seven of ashes. The salt should be fine, and the ashes dry and free from coals. If thought necessary the salt may be increased in quantity, to two or even three parts, instead of one. Try it, farmers, and see if it doth not "do good like a medicine."

In the season of pasturing I usually have several boxes or long troughs placed in a shed or out building to which the animals can at all times have free access, and which I keep constantly supplied with a quantum sufficient of the mixture. This plan is necessary, as an open exposure of the receptacles would subject the salt to injury in rainy weather.—*Exchange.*

Deep and Thorough Tillage.

We have noticed with pleasure that most farmers in this section have become converts to this system of deep plowing and fine tilth. Instead of making their soil mellow only four or five inches deep, as is still practised by a few, the general custom is to plow from seven to ten inches, and thoroughly pulverize the earth to an equal depth with the harrow and cultivator. Experience has taught them that a deep mellow soil is vastly more productive, other things being equal, than a hard shallow one. We expect soon to see a few enterprising men driving a second plow in the furrow of the one that breaks the surface, and thus secure to their crop a double amount of pervious soil, in which a double quantity of soluble mineral elements may feed and bring to maturity a double harvest. Very few fields in Western New York lack vegetable mould. So far as the atmosphere supplies nutritive elements, these are mainly dependent on the large develop of roots. A root of corn or other plant which is one-fourth of an inch in circumference and five inches long, presents to the soil, the rains, dews, and air of heaven, only one-third the surface for imbibing nutrition that it would if ten inches long and three-eighths of an inch in circumference. In a deep mellow soil and a large growth of roots, the husbandman is sure to have a corresponding growth of green stems and leaves above ground, to imbibe gaseous food from every passing breeze. The atmosphere can only fulfill its whole office in support of vegetation on deep pervious soils like river bottoms.

If the earth lacks any essential ingredient used by nature in the organization of the cultivated plant, no amount of tillage can create the absent element out of nothing. This fact should never be lost sight of.

We have a parsnip in our office $3\frac{1}{2}$ feet long; and have pulled beans in a field, whose roots ran 30 inches into the ground. To give plants a fair chance in a poor soil, it should be very deep, that roots may travel a good way to get their aliment.—*Gen. Far.*

Advice to Boys.

Be brisk, energetic and prompt! The world is full of boys, (and men too,) who drawl through life and never decide on anything for themselves, but just draggle one leg after the other, and let things take their own way. Such people are the dull stuff of the earth. They hardly deserve as much credit as the wooden trees; for trees do *all the good they can*, in merely growing, and bearing leaves and seed. But these drawling dragging boys do not turn their capacities to profit half as far as they might be turned; they are unprofitable like a rainy day in harvest time. Now the brisk, energetic boy will be constantly awake, not merely with his bodily eyes but with his mind, and learns what he has to do, he will take a pride in doing it *punctually and well*; and would feel ashamed to be told, what he ought to do without telling. The drawling boy loses in five minutes the most important advice; the prompt, wide awake boy never has to be taught twice; but strains hard to make himself up to the mark, as far as possible out of his own energies. Third rate boys are always depending upon others;

but *first rate boys depend upon themselves*, and after a little teaching, just enough to know what is to be done, they ask no further favors of any body. Besides it is a glorious thing for a boy to get this noble way of *self-reliance, activity and energy*. Such an one is worth a hundred of the poor dragging creatures, who cannot wash their own hands without being told each time, how it is to be done. Give me the boy who does his own work promptly, *and well*, without asking (except once for all at the beginning,) any questions; the boy who has wits about him is never behind hand, and don't let the grass grow under his heels.

THE HOG'S LIFE. The natural term of the hog's life is little known, for the plain reason that every man's hand is raised against him, as if he were *hostis humani generis*, a pirate and an outlaw! But it is related by Rev. Gilbert White on this subject, that a neighbor of his kept a half-breed Bantam sow, "who was as thick as she was long, and whose belly swept the ground, until she was seventeen, when she showed some tokens of age, by the decay of her teeth and the decline of her fertility, and was then fattened and killed." For ten years she produced two litters annually, of about ten, and once above twenty at a litter. At a moderate computation, she was allowed to have been the mother of some three hundred pigs!

GAMBLING IN BREADSTUFFS. One of the wisest regulations ever issued by the Emperor of Russia, or by any other sovereign, is the forbidding of land owners and dealers in corn from making *time-bargains* for the sale and delivery of that article. The sale of corn in London, to be delivered on a *certain day forward*, at a *certain price*, was carried on during the last season of scarcity to an astonishing extent, and millions of bushels of wheat were bought and sold by parties who never held a grain, but who, when the day of delivery came, paid or received the difference between the price stipulated for and the market price of the day. This gambling had a bad effect upon the market, raising it or depressing it unduly. If it had only affected the parties to the transaction it would not have signified so much; but it also affected the size of the poor man's loaf, and was injurious to the fair dealer and the *bona fide* holder of grain, who worked in the dark, and ran the risk of ruin without being aware of its cause, or being capable of averting it.—*Corr. Nat. Intell.*

BACK NUMBERS. Any person who may have on hand extra copies of Nos. 1 and 2 of this Journal, are requested to preserve them, to be returned to this office by the first convenient opportunity. Many thanks to the friends who have sent us large orders. We trust they will be multiplied,—as it is only by a large circulation that it can be made worth the while to publish the Journal at all. We shall endeavor to meet all orders, and supply the complete volume, even if we have to print a second edition of No. 1.—As the last number will contain a very complete Index, subscribers will of course wish to obtain and preserve all the numbers for binding.

The Markets.

BRIGHTON MARKET.... MONDAY, Aug. 23, 1847.

At market, 1000 Beef Cattle, 400 Stores, 20 pairs Working Oxen, 50 Cows and Calves, 4500 Sheep and Lambs, and 1000 Swine.

PRICES—Beef Cattle—Extra \$6 75; first quality, \$6 00 a 6 50; 2d, \$5 00 a 5 50; 3d, \$4 00 a 4 50.

Stores—2 years old Heifers and Steers, \$12 to 15; 3 years old Steers, \$15 to 20.

Working Oxen—\$60, \$72, \$87, \$95, \$110.
Cows and Calves—\$20, \$25, \$31, \$38, one extra \$50.

Sheep—Old Sheep \$1 50 to 2 75; Lambs \$1 25 to \$ 50.

Swine—At wholesale, old Hogs, 6 a 6½c; pigs 6 a 6½c.

N. B. Beef Cattle and Sheep dull, and quite a large number remain unsold.—*Journal*.

NEW YORK CATTLE MARKET.—Aug. 23.

At market, 1200 Beef Cattle, 4400 Sheep and Lambs.

PRICES. Beef Cattle—Only about 200 head reported from the South this week, the others from the Northern and Eastern States. Prices firm at \$6 to \$8 per cwt. 200 unsold.

Sheep and Lambs—Supplies rapidly increasing, but buyers enter the market with sufficient activity to dispose of nearly all that are offered. The unusual number on sale last week has affected prices somewhat unfavorably: the highest point reached being only \$3 50; and sales from that figure down to \$1 for Sheep. Lambs bring 75c to 2 75 as in quality.—200 left over.—*Journal of Commerce*.

BOSTON MARKETS—AUGUST 30.

FLOUR. About an eighth of a dollar reduction was submitted to, the first of the week, since which time prices have been quite uniform. The stock is light, and demand good for all kinds. Genesee sells freely at \$6 12½ for fresh and sound.

GRAIN. The inquiry for Grain during last week was moderate, and the supplies rather above the demand for Corn, causing a slight reduction in prices, which was continued to the close. Small sales Northern round Corn 88c; Southern yellow flat, 82 a 83c; do. white, 78 a 80c. Oats, being wanted, and few offering, sales were made as high as 60c; at the close the market is heavy at 58c.

PROVISIONS. There has been quite an active demand for Beef, Pork and Lard.

Beef, Extra Mess, 4m. brl	14 50	a
do Mess,	13 50	a 14 00
do Navy,	11 50	a 12 00
do No. 1,	11 00	a
do Prime,	10 00	a 10 50
Pork, extra clear, 4m,	19 50	a
do clear,	18 50	a 19 00
do Mess,	16 15	a 17 00
do Prime,	13 00	a 14 00
Butter, shipping order, lb.	14	a 17
do store,	13	a 18
do family, prime,	22	a 23

Lard, No. 1, Boston inspection,	11	a 11½
do Southern and Western,	10½	a 11½
Cheese, shipping,	6	a 8
do new milk,	7	a 9
do four meal,	5	a 6

Wool. We have no change to notice in the price of fleece Wool. There is but a small supply of pulled in our market, and for some manufacturers, where this description of Wool is generally used, fleece has been substituted.

Prime Saxony Fleeces, washed, lb.	45	a 50
American full blood,	40	a 45
do ¾	35	a 38
do ¾	31	a 33
do ¾ and com.	27	a 30
Extra Northern pulled lamb,	38	a 40
Super do. do. do.	33	a 35
No. 1 do. do. do.	28	a 30
2 do. do. do.	19	a 20
3 do. do. do.	14	a 15

Courier.

NEW YORK, Aug. 30, P. M. The news by the steamer has unsettled the markets, and there have been but few transactions. Genesee Flour may be quoted nominally at \$5 75; and Western at 5 50 a 5 68½. Corn heavy. Sales Northern yellow at 75 a 78c; Oats at 45 a 49c. Pork heavy.

LIVERPOOL CORN MARKET, August 14. Weather rather unsettled the last eight or ten days. The extensive arrivals from the U. S. and the continent have tended to keep prices from rising. At market 6th instant, Wheat languidly sold at an advance of 2d to 3d per 70 lbs: an improvement of 2s to 2s 6d per bbl was paid for Flour, but sales were limited. Indian Corn and Indian Meal were taken sparingly at our last quotations. On the 10th, Wheat in moderate demand at rates of 6th inst, but Flour somewhat cheaper—say 1s to 2s per bbl. Yesterday, a fair attendance of buyers. Sales Wheat at a decline of 3d to 6d per bushel; and Flour, of which the supplies are large, found difficulty in obtaining from 25s to 27s per bbl; chief sales at 26s. In the morning a sale of both Flour and Indian Meal was made; former is reported to have realized only 20s, and the latter 19s 6d per bbl.

LONDON CORN MARKET, August 14. Market dull and depressed condition, and prices further receded, with a continued downward tendency. On the 9th, Flour was 5s per sack under the previous week's rates. Owing to large arrivals, Flour depressed on the 11th. Mark-lane was in a quiet state yesterday, August 13. Both Wheat and Flour ruled dull, and prices were a shade lower than on the 9th. No business in Indian Corn or Indian Meal.

MEASURE OF THE ENGLISH QUARTER AND BUSHEL. Many persons do not clearly comprehend the "quarter," as applied to grain in England. It is this:—A ton is 2,240 lbs., a quarter of that is 560 lbs., and this is the weight. The U. S. standard allows 60 lbs., the British 70 lbs.—thus, 8×70=560. A bushel of wheat in the U. S. is equal to 6.7ths of an English bushel, and a British quarter of wheat is equal to 9½ U. S. bushels of 60 lbs. each. A load of oatmeal is 210 lbs., and a sack of flour is 280 lbs.

A RECIPE. Let every person keep a little pulverized charcoal in their bedroom, and, on retiring, take about as much as can be placed on a sixpence, and work it about among the teeth with the tongue. If this be persevered in, it will not be long before there will be no such thing as a decayed tooth. Mrs. Child says in one of her excellent works, that decayed teeth may be restored to soundness by these means; but whether this be so or not, I know that while this simple recipe is attended to, no decay of the teeth can take place. Try it.

No DENTIST.

HARVESTING MACHINE. A correspondent, writing from Michigan to the New York Evangelist, says: "A field of sixty acres was harvested in two days, as follows: A machine was drawn into the field by sixteen horses, guided by as many boys as necessary. On the front of the machine a man was stationed to adjust the forks and circular knives to the height of the wheat, which was readily thrown back into the machine. No more was seen of it till another man in the rear part of the machine was observed tying up well-filled sacks of pure grain, in perfect order for the flouring-mill. This huge machine harvested and bagged three bushels of the best wheat in a minute."

PRODUCTIONS OF NAHANT. We lately alluded to a curiosity at the Horticultural Exhibition, in the shape of a small branch from a pear tree in Mr. Tudor's garden at Nahant, on which were 234 pears. A gentleman yesterday presented us with a small piece of a *gooseberry bush*—two twigs, six or seven inches long—on which were over one hundred gooseberries of respectable size and fine appearance! This is the most extraordinary phenomenon in the vegetable world that we have seen for some time. The gooseberry bush also flourished on Mr. Tudor's finely cultivated grounds at Nahant!—*Boston Journal*.

Domestic Economy.

CORN BREAD. We are in the daily habit of eating corn bread made after the following recipe, by our good landlady, Mrs. Norton, of Astoria. It is equal to anything we ever tasted:—To one quart of sour milk add two teaspoonfuls, well stirred in, of finely pulverised saleratus, two eggs well beaten, one tablespoonful of brown sugar, and a piece of butter as large as an egg. Salt to suit the taste, and then stir in the meal, making the mixture about as stiff as for pound-cake. Now comes the great secret of its goodness. *Bake quick*—to the color of a rich, light-brown. Eat it moderately warm, with butter, cheese, honey, or sugar-house molasses, as most agreeable to the palate.—*Am. Agriculturist*.

TO MAKE EGG PONE. Beat until light one egg; add a pint of milk, half a tea-spoonful of salt, half a table-spoonful of lard, and one pint of corn-meal. Stir until perfectly smooth; grease well the pan, and bake three-quarters of an hour. Corn bread requires much stronger heat than wheat.

This same mixture baked on a griddle gives us the batter-cakes, with the addition of more milk, making

the mixture thin, to bake which successfully, the griddle must be hot; grease it and put a spoonfull in a cake.—*Farmer's Library*.

TOMATOES. There are but few tomatoes sent to market in a proper state for food, as they are nearly all pulled just as they are beginning to change colour. They ought to stay on the plant, not only till they have turned to their right colour, a deep red all over, but longer, in order that they may obtain their proper flavor; or, in other words, until the process of maturation (which is performed by the plant with the aid of its foliage) has changed, and rendered wholesome the various substances contained in the fruit. If the fruit be taken off the way it usually is, maturation does not follow, but a kind of decomposition takes place, and, before substances have undergone a thorough change, as they ought to do, in the regular ripening process, putrefaction takes place. Cooking may rectify some of the bad effects of this injurious mode of using them, but still there is a good deal of acidity in unripe tomatoes, let them be ever so well cooked.

A QUICK MODE OF COOKING TOMATOES. Boil the tomatoes a quarter of an hour, with milk sufficient to cover them; add, while boiling, a little batter made of water and wheat flour, and season the dish according to your taste. The advantages of this mode over those usually practised, are, that the tomatoes are rich, though less acid, and are much sooner cooked.—*Am. Agriculturist*.

SCIENCE FOR THE KITCHEN. Professor Liebig, in a late letter to Professor Silliman, says:

"The method of *roasting* is obviously the best to make flesh most nutritious. But it does not follow that boiling is to be interdicted. If a piece of meat be put in cold water, and this heated to boiling, and boiled till it is 'done,' it will become harder and have less taste, than if the same piece had been thrown into water already boiling. In the first case the matters grateful to the swell and taste, go into the extract—the soup; in the second, the albumen of the meat coagulates from the surface inward, and envelops the interior with a layer which is impregnable to water. In the latter case, the soup will be indifferent, but the meat delicious."

DISINFECTING FLUID. A report on Mr. Ledoyen's "Disinfecting Fluid," by Dr. Southwood Smith, R. D. Grainger, and Joseph Toynbee, Esqrs., has just been presented to Parliament. According to Mr. Ledoyen's statement, the fluid disinfects night-soil, not destroying, but increasing vegetation, more particularly as regards agriculture, completely preventing the disease in potatoes, when the land is manured with disinfected night-soil. It disinfects hospital wards of miasma, also cellars, water-closets, and buildings infected by impure gases. It disinfects sailors suffering from fever on board of vessels; it will also disinfect ships at sea and under quarantine. It disinfects patients suffering with infectious disorders and wounds, also dead bodies, so that they may be kept nearly a month; also different parts of the body can be kept for the purpose of dissection, for coroner's inquests, &c.—*Liverpool Times*.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. I.

WINDSOR, VT., OCTOBER, 1847.

No. 6.

THE SCHOOL JOURNAL.

For the School Journal.

School Convention.

MONKTON, 9 mo. 8, 1847.

To the Editors of the School Journal:

In relation to the School Convention lately held at Middlebury, an account of the proceedings of which I have forwarded to you, I may perhaps be allowed to say, upon my own responsibility, that the afternoon sitting was well attended, and the interest manifested could not fail of being cheering to the friends of our common schools, while it was a practical rebuke to the indifference with which some attempt to treat this important subject. I can hardly think there was an individual present who did not participate in the general desire to see our common schools placed upon a respectable footing, however they might differ upon minor points. It was not to be expected that all would think exactly alike upon the several subjects introduced for discussion; if it was, where would have been the need of the Convention? But no small share of the gratification to me arose from observing that the difference in sentiment did not disturb the desired harmony.

Yours, respectfully,

H. M.

A Convention of Teachers and friends of Common Schools of Addison County was held, pursuant to public notice, at the Town Room, Middlebury, Sept. 1, 1847.

The Convention was called to order by L. L. Tilden, Superintendent for the County.

L. D. Gregory was appointed Chairman, and Henry Miles, Secretary.

L. L. Tilden, S. P. Lathrop, and S. Bottom were appointed a Committee to prepare business for the Convention.

L. L. Tilden, on the part of said Committee, reported the following resolution.

Resolved, That this Convention recommend to the Prudential Committees of our school districts not to employ teachers who have not a certificate of license before commencing their schools.

Which, after a full discussion by L. L. Tilden, J. L. Edgerton, S. P. Lathrop, L. D. Gregory and others, was adopted.

The following gentlemen were appointed a Committee to recommend books to be used in our district

schools, viz: L. D. Gregory, George Smith, David Hopkins, Sylvester Doud, and S. P. Lathrop.

Adjourned.

AFTERNOON. Met according to adjournment.

The Committee of overtures presented the following resolutions:

Resolved, That we recommend that a portion of Scripture be read daily, as a devotional exercise, in the schools of this County.

Adopted without discussion.

Resolved, That we recommend to Teachers and Parents, the School Journal, as worthy of their patronage.

The resolution was fully discussed by Prof. Twining, L. D. Gregory, J. L. Edgerton, L. L. Tilden, H. Miles, S. Bottom, S. Doud, A. K. Brush and others, and adopted.

L. D. Gregory, on the part of the Committee on School Books, recommend the use of the following: Russell and Gouldsbery's series of Reading Books, Wells's Grammar, Greenleaf's Mental Arithmetic, Colburn's do., Smith's Quarto and First Book or Child's Geography.

In relation to Adams's Arithmetic and Webster's Spelling Book, they being in such general use, it was deemed not advisable to propose any change at this time.

On motion of Prof. Twining, the report was amended by the following resolutions.

Resolved, That if, in any schools of the County, a change is made in Arithmetics, this Convention recommend Davies's Common School Arithmetic.

Resolved, That we disapprove of the use of Keys in the case of any Arithmetic whatever.

And after a lengthened and interesting discussion, in which Prof. Twining, S. P. Lathrop, Dr. Merrill and several others participated, the report was adopted.

After an exhibition of Mitchell's Outline Maps, accompanied by explanatory remarks by C. O. Kimball; also a set of Bliss's Outline Maps, exhibited by L. F. Clark, the following resolution was adopted:

Resolved, That this Convention recommend the use of Outline Maps in the study of Geography in our district schools.

After listening to the remarks of Mr. Foster, setting forth the claims of Hazen's Grammatic Readers and Composition Book, the following resolution was adopted:

Resolved, That this Convention earnestly invites the attention of Parents and Teachers to a System of

Grammatic Readers, Nos. I. II. and III., by Edward Hazen, A. M., published by J. S. Redfield, New York.

The proposition to establish a Teachers' Institute met with a cordial reception, and resulted in the adoption of the following resolution:

Resolved, That Messrs. George Smith and L. D. Gregory be appointed a Committee, with the County Superintendent, to prosecute without delay the eminently important object of establishing a Teachers' Institute for Addison County.

After which the Convention adjourned.

L. D. GREGORY, *Chairman*.

HENRY MILES, *Secretary*.

Teachers' Institutes.

In the present state of our Common Schools nothing promises better results than TEACHERS' INSTITUTES. Were all our Teachers and candidates for the teacher's office, well taught in all that relates to the instruction and management of a school, it would be different. Then probably conventions of teachers, where each could impart for the benefit of all the results of his experience, and where a little time might be spent in awakening zeal and stimulating effort, might be better. As it is, there is a great want of knowledge. It is one thing to understand arithmetic for one's own use in the business of life; and quite another thing to be familiar with all the ways and means that a teacher ought to have at command for imparting that knowledge to children and youth. It is one thing to be a good scholar, to delight in study, and to pursue it with industry and zeal; and quite another thing to be able to awaken and keep up a spirit of study among fifty undisciplined boys and girls. It is one thing to delight in seeing a well-regulated school; and quite another thing to be able to regulate one.—to know how best to manage children of various characters and in different circumstances, so as to make everything move on pleasantly. In a word, after the candidate has become sufficiently familiar with school studies, he has yet in most cases very much to learn in order to manage a school to good advantage.

In Germany, Switzerland, Holland, &c., this preparation for teaching is the work of Normal Schools. The course in the Prussian Normal Schools occupies three years; "the first of which is devoted to supplementary primary instruction, the second to specific and more elevated studies, and the third to practice and occasional experiments in the primary school annexed, and in other schools of the place."^{*} In addition to this Teachers are frequently sent again to distinguished schools, after having been employed, that they may perfect themselves in the methods, and make themselves acquainted with the latest improvements in the art of teaching. Or they are encouraged to form associations, or are sent to travel in Prussia and in other countries, for the same purpose.[†] In Switzerland, "all with whom I conversed," says Mr. Kay, "assured me that their experience had taught

them that three years were absolutely necessary for the education of a master; that wherever less time had been tried, it had always been found insufficient; and that in order that even three years should suffice, it was necessary that the young man entering the Normal School should have completed his education in the primary schools."^{**}

In Scotland Normal Schools do not exist. But instruction has there been so thorough from generation to generation, and the supply of teachers is so ample, that competition, with early discipline and a very intelligent supervision, secures the object, to a great extent.

Now in Vermont the best immediate substitute for this thorough course of training, is found in our Teachers' Institutes; where, under the guidance of an experienced teacher who is acquainted with all the best methods, candidates for employment may spend from two to four weeks twice a year in suitable studies and exercises. So evident are the benefits of these short Normal Schools, as they may be called, that in most of the New England States, and in New York and Ohio, they are encouraged by some special legislative provision for defraying the expenses. In Ohio the counties are authorized to use for this purpose an amount which is estimated to be adequate to the payment of all expenses, besides providing a good Teachers' Library.

As these Institutes have been managed in New England, the expense is a mere trifle when compared with the results. Still there is expense; and an expense which, in Vermont, is defrayed entirely by the Teachers. They must pay board and tuition, besides something for traveling and other incidental expenses. Considering the wages that we pay, it is not strange this expense should deter many from attending.

As it is for the public good that these Institutes should be sustained, and that in a liberal manner as to time, apparatus, &c., ought not the public in some way to furnish at least part of the funds? Does not the example of other Legislatures in the premises, deserve the consideration of our own? Even an appropriation sufficient to pay the wages of 10 or 12 Teachers for eight weeks each, annually, would be substantial encouragement; in many cases it would doubtless decide the question of the existence, or the length, of Institutes, and in multitudes, the attendance of persons who, by their means, might be better qualified for that most momentous charge,—the culture of mind and the formation of character among our children and youth.

^{*} Education of the Poor in England and Europe.

Cheap Pleasures.

As a people we are ready enough to be taxed a quarter of a dollar each, by any man who will amuse us for an hour or two. Nor are we particularly choice in regard to the kind of amusement, or easily deterred from it by any discomfort to the body, or anything disgusting to the taste. Bear witness, ye managers of Circuses and Menageries—for ye know I! Is it because we are too lazy to do the work, that we prefer such, to cheaper pleasures that we might pre-

^{*} Conklin's Report, p. 65.

[†] *Id.* pp. 76, 7.

pare for ourselves? The question is suggested by an account given by Sir Francis Head, of a pretty celebration that he witnessed in Germany, and which seems to have given a day's delight to a whole town at an expense of not more than ten shillings, all told.

A new school-house had been built in the village of Langen-Schwalbach, and the children were about to take possession of it. Sir Francis shall tell us how it was done.

"One morning, during breakfast, I observed several little children passing my window in their best clothes. The boys wore a sort of green sash of oak-leaves, which, coming over the right shoulder, crossed the back and breast, and then carried round the waist, hung in two ends on the left side. The girls, dressed in white, had roses in their hair, and held green garlands in their hands.

"On inquiring the reason of the children being dressed in this way, I learned that there was to be a great festival and procession to celebrate the taking possession of a new school-house, which, built by the town, was just completed. Accordingly, following some of the little ones down the main street, I passed this village seminary, whose first birth-day was about to be commemorated. It was a substantial building, consisting of a centre with two square wings.—Wreaths of oak leaves were suspended in front, and long verdant garlands of the same tree hung in festoons from one wing to the other. It was impossible to contrast the size of this building with the small houses in its neighborhood without feeling how creditable it was to the inhabitants of this little town to appropriate a portion of the money drawn from strangers, to this sensible and patriotic object.

"After passing this new seminary I continued descending the main street about one hundred yards, which brought me to a crowd of people standing before the old school house, into the door of which, creeping under the arms of the grown persons, child after child hurried and disappeared, like bees going into their hive.

"The old school house of Langen-Schwalbach is one of the most ancient buildings in the town. On the front wall there are several inscriptions, such as '*Ora et labora*, [work and pray] 1552.'

"I observed that no one entered this door but the children. However, as in this civil country great privileges are granted to strangers, I ascended an old rattle-trap stair-case, until, coming to a landing-place, I found one large room on my left full of little boys, and on my right another overflowing with little girls; these two rooms composing the whole of the building.

"On the landing-place I met the three masters, all very respectably dressed. The senior was about forty years of age; the two others were well-looking men of about twenty-six. One of them informed me that the school was composed of 150 boys and about as many girls.

"It was a pretty sight to witness such an assemblage of little boys, with clean shining faces, and the oak leaves gave a freshness to the scene that was very delightful.

"The chamber full of little girls would have pleased any body, so nicely were they dressed, and so well-behaved were they. The garlands they held in their hands, the wreaths of flowers that bloomed on their heads, and the smiles that beamed on their faces formed about as pretty a mixture of the animal and vegetable creation as could well be imagined. All of a sudden a signal was given for the children to descend, and it then became quite as much as the masters could do, to make them go out of the room hand in hand. After the children the masters descended, and we followed them into the street, where the civil authorities and almost all the parents of the children had assembled.

"A soon as the children had reached the new house, a band which was awaiting their arrival, struck up; and in the open air they instantly sung a hymn. The doors were then thrown open, and they all in high glee scrambled up the stairs. The mayor, the ministers, and masters having followed the children, a great rush was made by parents and spectators.

"As soon as order was established and silence obtained, two of the clergymen—the first a Catholic and the second a Lutheran—each made a brief address, and the children sang a concluding hymn. The mayor made a bow, the ceremony was at an end, and all returned to the fresh air.

"Hearing that the children would conclude their festivity with a dance and a supper, I took a short walk in the mean time, and returned to their entertainment at four o'clock. I was too late. The remains of cakes and fruit were scattered over two long tables and the children were dispersed. But I was graciously welcomed and was offered a seat. The children were too well satisfied to enjoy dancing, but disposed themselves in groups about the school-room, seeming to be as happy as possible. Sometimes the boys amused themselves with a singing game, which contained as much laughter as music.—The girls had their song. While they were thus enjoying the delightful occasion I departed, reflecting that nothing is cheaper than innocent pleasure. I firmly believe that the whole festival I have described—roses, oak-leaves, garlands, festoons, cakes, and apples, altogether—did not cost the town of Langen-Schwalbach ten shillings! Nevertheless, in its history the opening of a public establishment so useful to future generations, and so creditable to the present one, was an event of no inconsiderable importance."

Now, why might not festivities, substantially like this, be enjoyed in every town in Vermont as often as once a year? The expense is nothing; there is no crowding in uncomfortable tents, no exposure of body or of soul to evil, nothing hurtful, nothing disgusting. The influence is healthful in all its bearings. Interest in a good cause is strengthened, and the hearts of parents and children united and warmed with a new zeal in promoting it.

VERY SENSIBLE. It was well remarked by an intelligent old farmer, "I would rather be taxed for the education of the boy, than the ignorance of the man. For one or the other I am compelled to pay."

Moral Influences of School.

[From Prof. Haddock's Report.]

The strictly moral influences of School are of great price. The opportunities presented by a well-chosen series of School Books and in the personal intercourse of a sensible, conscientious teacher of a public School for inculcating right principles, and correct, amiable, courteous habits of life, are frequent and of the highest importance to the community. A school conducted on sound principles is a necessary auxiliary to domestic discipline. It is of great consequence to youth to be accustomed to recognize religious truths and practical moral principles in the society of their equals, openly and frankly. In school this may be done; some useful principle, some important habit may be daily considered; the truth and authority of the Scriptures daily acknowledged; the practice of devotion and worship daily exemplified. In this way the universal conviction of our dependence on God and our common need of the mercy of His Son Jesus Christ, and the duties which we owe to one another and to our country get inwrought into our common feelings: we cease to feel an awkward shyness and reserve in reference to them; they become part of the public sentiment, which no man thinks of questioning and which it requires some hardihood in vice wholly to disregard. Men of conscience are in danger of being made hypocrites, and without conscience of being made blasphemers, by the studious exclusion of moral and religious instruction from the schools. Children educated without the public recognition of virtue and piety as essential characteristics, by common consent, of every proper man, are afraid to appear scrupulous or religious; or bold enough to outrage those moral sentiments which we seem to consider too unimportant to be taught. And hence the strange fact, that with the best religion in the world, the only true religion, Christian nations are the only nations upon earth who abound with men ashamed to be thought religious, or bold enough to laugh to scorn all such as profess to be so.

My idea of the true method of moral instruction in a school is to secure, in the first place, a man of virtuous life and of sound well-reasoned principles for a teacher. His school should be a model of order; his requisitions all reasonable and commended by clear and weighty considerations to the understanding and conscience of the pupil. A very short and simple prayer, or, if the teacher do not feel authorized to lead in prayer, a portion of Scripture read either by himself or the school should open the exercises of the day. In the course of the day, some vice, or virtue, some principle of action, should be defined, and treated, in a few words, but so as to fix attention and awaken thought in the members of the school. And above all should there be in the person of the master himself an example of the precepts he enjoins, and a hearty, earnest interest in the promotion of virtue, a sincere delight in noble character, a real passion for moral excellence, for generous, patriotic, honorable action.

I cannot imagine that such a discipline should fail to commend itself to all right-minded persons, or to

encourage in our children right principles and virtuous habits.

One of the last good influences, which a judicious parent would readily forego in the moral training of his children is that, which is exerted, by a thoughtful, patient young man, not yet too far removed from them in age to feel a natural sympathy with their difficulties, their fears, their prejudices and their honest and ardent impulses, placed over them in the relation of a teacher—their intellectual and moral parent.—There are not many who have not occasion to remember him as the author of some simple suggestion, or the pattern of some useful trait of character, which has proved to them an era in their moral history, and given a new turn to their whole subsequent education.

Moral Duties and Habits—How Taught.

Justice, and respect for the rights of property. Justice, in its true meaning, is not less comprehensive than charity. It embraces what is due to ourselves and what is due to others. It demands of me that I should respect the property, the opinions, and the feelings of others. It teaches me that I have a right that others should respect my property, my opinions, and my feelings. In this comprehensive sense, it is second to no duty in importance.

It should be taught and enforced in school, both on account of its intrinsic excellence, and because it can be taught nowhere else so well. A school is a miniature community. Events are daily occurring in it similar to those which occur in society in after life.—It gives wider scope for duty than a family, because it embraces a greater variety of relations, and thus creates a greater variety of rights. All of these are liable to be infringed, and each infringement gives occasion for a lesson in justice. It may, moreover, be better taught than in a family, because there is one person in a school who should always be ready to attend to it. The teacher has no higher duty than this. He must not let the occasion pass by without taking advantage of it. Besides, he is, or ought to be, better qualified to teach this virtue than many parents.

It may be better taught in school than from the pulpit, because it is most naturally and effectually taught by instances such as are continually presenting themselves in school, and because it should form a part of the earliest lessons of children, of an age not commonly touched by the instructions from the pulpit.

It rests on the same foundation as the duty of charity.—on the great Christian law, "Whatsoever ye would that men should do to you, do ye even so to them;" and to this it should always be referred.

The simplest and most comprehensible application of this law is to the rights of property. "Thou shalt not steal," should be explained, not only to signify what, in its limited sense, it is commonly taken to mean, but to forbid all injury done to property.

Let me give a single instance.

A teacher often heard complaints of the injury done to bonnets, hats, and cloaks, in the entry where they were deposited when the children entered school.—Not unfrequently a cloak was taken down from its peg, or carelessly thrown down, and afterwards trampled

on, dirtied, and sometimes torn. To present the matter in its proper light, he took occasion, in one of the general lessons, immediately after an injury of this kind had been done, to speak of the crime of theft.—He showed that this consisted in taking, without leave, an article belonging to another. "This form of the offence," he said, "most of you are in little danger of committing; but a part of the evil of this violation of the rights of property is in the injury done to a person by depriving him of his property, and a part in the disappointment or vexation which it causes him. Now I have observed that injury is often done,—not a very great injury, to be sure, but an injury which is of some consequence,—to the cloaks and hats in the entry. You do not mean to injure each others' property; but by your carelessness and thoughtlessness, you do actually violate the spirit of the command, 'Thou shalt not steal.' Maria's cloak, which was thrown down, and trampled on, is injured. She left it in its place; it was taken away, and she had to lose her time in searching for it. When she found it, instead of finding it neat and clean as she left it, she found it dirty and torn. She must have had her feelings hurt. Her property had not been taken away, but it had been injured, and she is subjected to the mortification of wearing home a dirty and trampled garment. If it had been my own cloak which was so much injured, I should certainly have preferred that money should have been taken from my pocket. It would have cost me money to have it mended; and, besides, I should have had the additional pain of seeing its beauty destroyed. None of you will think of taking my money; yet whoever throws down and tramples on my cloak, does me more harm than if he had taken some of my money. Can this be right? Is not this violating the spirit of the command of which I have been speaking!"

In a similar manner may we show that justice requires us to respect the *feelings* of others.

The greatest defect in the American character, in reference to others, seems to be want of respect for superiors. This leads to ill manners of every kind; for children ought rather to regard all as their superiors, and to be taught to respect them; and such, doubtless, is the spirit of the morality of the Gospel. Every teacher may do much to inculcate a right feeling in children towards their superiors, and a simple and modest habit of expressing it. There is no difficulty in the matter, except the proneness among teachers to consider it as something not belonging to them. But it is the duty of a teacher to do what he can for the benefit of his pupils in every respect, in manners as well as morals. They are intimately connected. Good manners are merely the outward expression of good feelings and good morals, and there must be some great defect in the latter when there is so much that is wrong in the former. The real defect at bottom is inordinate conceit and want of modesty. Much may be done towards correcting this by the example and instructions of a teacher who is himself modest. He should inculcate obedience to parents, and respect for the aged and for the stranger.

Submission to the *authority of Law*. In no part of the world is this so important as in these United States.

Ours is a government of laws. All our people should therefore be accustomed, from their earliest years, to submit to the authority of law; to submit, not by compulsion, but voluntarily. This is one strong reason why authority should be established, and laws strictly observed, in every school. In this respect, school *must be* a preparation for the society of the world. It should be the object of the instructor, in his system of government, to form the habit of obeying the law because it is just law, and because it is for the common good. Such reasoning as the following may be employed: You see that, if every boy in school be allowed to leave his seat, speak, or whisper whenever he pleases, it will be impossible for any one to study. The purpose for which you came here will be defeated, and school will be of no use. Order and quiet must therefore prevail; and that all may enjoy the great advantages which follow from them, each one must consent to give up a portion of his liberty. He will gain much more by it than he loses. He only gives up the privilege of making a noise when he ought to be quiet; and in exchange, he gains the privilege of not being interrupted by every one of forty others when they please to interrupt him.

School Order and School Morals.

Hon. Horace Mann has been complained of in some quarters as inclined to banish the use of force from the school room, and as favoring views of the character of children that would render such a course practicable and safe. Whatever may have given occasion to these complaints, the following paragraphs from his last Report as Secretary of the Massachusetts Board of Education, do not countenance them. After so many years of study and extensive observation, he is certainly not *now* among those who believe human nature so perfect, or so controllable by the moral and intellectual influences that man can wield, as to warrant us in taking the rod from the hand of the school-master, or the sword from that of the magistrate.

EXTRACTS.

"How shall the rising generation be brought under purer moral influences, by way of guaranty and suretyship that when they become men, they will surpass their predecessors, both in the soundness of their speculations and in the rectitude of their practices? Were children born with perfect natures, we might expect that they would gradually purify themselves from the vices and corruptions, which are now almost enforced upon them, by the examples of the world. But the same nature by which the parents sank into error and sin, preadopts the children to follow in the course of ancestral degeneracy.

"Not nearer to the day of destruction is a community without knowledge, than a community which relies upon knowledge *alone* as sufficient to preserve it. According to the present constitution of the human mind, and of the world in which we are placed, knowledge is a necessity in the pursuit of happiness; but morality is a preliminary necessity, elder-born and eternal. We can conceive of a state of existence where we could be happy without knowledge; but it

is not in the power of any human imagination to picture to itself a form of life, where we could be happy without virtue.

"How unworthy the sacred office of a teacher, if he incites his pupils to effort, only by displaying before them a brilliant prospect of worldly honors and distinctions, or the power and pride of wealth, while he neglects to cherish the love of man in their bosoms, or to display before them daily, the evidences of the goodness and wisdom of God! I care not how promptly the classes may respond in the school-room, if I hear profaneness or obscenity in the play-ground. I care not how many text-books they have mastered, if they have not mastered the passions of jealousy, and strife, and uncharitableness. It is not indispensable to the happiness of children that they should know the length of all the great rivers, or the height of all the great mountains upon the globe; but it is indispensable to their happiness that they should love one another, and do as they would be done unto. A life spent in obscurity and supported by daily toil, may be full of blessings; but no worldly honors, however high, can atone for any dereliction from duty in acquiring them.

"The charge committed to his care is weak, ignorant, immature, and constitutionally subject to error.

"Order must be maintained. This is the primal law. The superiority of the heart; the superiority of the head; the superiority of the arm; this is the order of the means to secure it.

"The great question is to whom, or to what, the obedience or subordination is due. It is primarily due to the law,—to the law written upon the heart, to the law of God. The teacher is the representative and interpreter of that law. He is clothed with power to punish its violations; but this comprehends only the smallest part of his duty. As far as possible, he is to prevent violations of it, by rectifying that state of mind out of which violations come. Nor is it enough that law is obeyed. As far as possible, he is to see that it is obeyed from right motives.

"It should never be forgotten that the highest duty of a teacher is to produce the greatest quantity, and the purest quality of moral action.

"A large class of men seem to have lost that moral sense, by which the liberty and life of innocent men are regarded as of more value than the liberty and life of criminals."

Moral and Religious Culture.

We take the following extract from an Address delivered by Gov. Slade, at Chicago, as reported in the Herald of the Prairies.

"Moral or rather religious culture is essential to all proper education; there can be no true Morals without the inculcation of the first principles of religion. Mere intellect is cold. We may by an intellectual process come to the conclusion that all men are brethren, but the conviction is not felt. Many conclude there is a God—but it is a mere speculation without life. Conscience is to be enlightened and quickened, and this can be done only by the religious idea of God, as moral governor and judge of men. Children must

be taught to have a conscience in everything. With the Christian apostle, they should be taught that whatever is right in the sight of God must be done at all hazards, and done always, public sentiment and personal interest to the contrary notwithstanding.—Train children thus, and all those habits and descriptions of business that are pernicious to the morals of society will cease. The rumseller and his destructive business will be avoided as they should be, and future generations will feel for those in bonds as bound with them. We have consumed much time and labor to learn children many things; but how much instruction have they had to learn them to do right! We have labored much with the intellect. We must labor more with the conscience and heart.

The law of love—love to the Maker, love to man as a brother—should be taught in our common schools. The process of active benevolence, forbearance, disinterestedness, peace, ought to be taught in common schools. Let the process commence at the cradle, and go on up through all the stages of education.—Let conscientious and well instructed females give the first impression and direction to the young families. I say females, because they know best how to reach the infant heart, and they know best how to reach the adult heart too. Give well qualified female teachers the Bible. Give them the faith of the New Testament, and let them take the New Testament in their hand, and then commit to them the early instruction of the young, and our land is safe. With the New Testament as a standard, God is our teacher—with the example of Christ, not to be admired, but imitated, the world will make progress. The rising generation will, under such instruction, become the conservators of the future glory of our land, and of our world."

For the School Journal.

Hints to Teachers.

THE ORDER OF STUDIES.

Reading and spelling are the studies of primary importance. They lie at the foundation of a good education; and if these are neglected no other acquirements can be regarded as an equivalent. They should therefore occupy a prominent place in the exercises of the school for all the scholars, and be regarded not only as exercises, but as studies which should be previously read and examined with care. The rules for spelling contained in our spelling-books should be committed to memory also, and the principles applied in the spelling exercise.

There are different opinions in regard to the studies which most appropriately follow these. I think that Geography is best adapted to the capacity of children at this stage of their education. It is calculated to interest them and get their attention, and affords that kind of mental training which is at first most desirable.

The faculty of the mind which is first called into exercise, and on which all the other faculties depend, is memory, and hence it is important that those studies should be first taken which are best adapted to develop this faculty. The memory depends on the degree

of attention, or the intensity with which the mind regards or examines any subject. Those studies therefore which tend to establish the habit of steady and fixed attention, will favor the improvement of memory. The attention of children is much more easily gained by those studies which are of a descriptive or narrative character, as Geography and History, than those which relate only to abstract principles, as Arithmetic and Grammar; and by directing children to the former studies the habit of fixed attention may be first acquired, and the memory thus receive its first training; and afterwards the latter class of studies may be pursued and rendered more effectual in strengthening and improving this important faculty as well as the other mental faculties. In ascending the hill of science it is better to lead the child by some pleasant path and in a more gentle ascent, and he will gradually acquire strength to surmount the rugged acclivities; whereas if you bring him directly to the smooth face of the precipice, he may be discouraged in his attempts to climb, and perhaps fall back, never to rise.

Geography therefore, appears to be the most appropriate study for the younger scholars to commence with, and Smith's introductory work, which has been recommended for use in this State, is admirably adapted to interest the child and render study delightful as well as profitable.

It would be very excellent economy if every district could be supplied with a Globe and Mitchell's Outline Maps. The expense would not average more than \$1, to each voter, and scarcely a family in which there are children to be educated, could fail to receive thrice that benefit in the additional amount that the children would learn in the same time, with the aid of these helps. The price of these maps, 25 in number, is \$15. The best Globe for common schools is Cornell's, which may be procured of W. B. Fowle, 184 Washington-street, Boston, for \$3. It is so mounted on a stand as to represent the inclination of the axis of the earth to the ecliptic—with a horizon, by which the change in the length of the days in different seasons of the year and in different latitudes, may be explained, and is accompanied by a book giving directions for the use of Globes, &c. It is *multum in parvo*, and altogether the most desirable piece of apparatus for the price, which has been prepared for common schools.

To vary the exercise and interest the children, they may occasionally be required to draw maps, (and even young children will copy the maps in their books or atlases with far more accuracy than would generally be supposed,) or some information of a miscellaneous character may be imparted as a general exercise,—as the description of the animal or vegetable productions of the countries which constitute the lesson, the government, the character of the inhabitants, &c.

History of the United States is one of the studies which the statute requires to be taught in our common schools, and is an interesting and profitable study. Both history and geography tend to enlarge the capacity of the mind, and to wake up its energies. Those ignorant of these branches have but a limited

comprehension of the world we inhabit, and can have no adequate conception of the location, size, or character of the different countries of the globe, nor can they very well appreciate the importance of the political movements which are taking place in our country. If unacquainted with our country's history they may have a vague impression that the terms applied to our political parties are indicative of good or bad qualities, but why or wherefore they cannot tell; and their political course will be guided by the sound of these words without any idea of their bearing. The most absurd and dangerous principles may be carried into operation through the magic influence of the name of democrat or federalist, when the actors are entirely ignorant of the origin and meaning of these terms. Hence the importance that our people should be early taught the history of our country, so that they may think and reason for themselves, and judge understandingly of the effect of any proposed political measures.

Arithmetic should follow, and grammar should come last. There are none of the studies pursued in our common schools which require greater maturity of mind to pursue to advantage than this. Grammar is, in fact, the philosophy of language; and judgment and discrimination are required to comprehend its principles. There are but few individuals who may not look back upon one or more terms lost, or worse than lost, by having this study assigned to them before their minds were sufficiently mature to profit by it. The teacher may practically enforce its principles by correcting all improper expressions on the part of his pupils in speaking or writing, and by giving general exercises relative to the structure of language, the definitions of the different parts of speech, &c.; but as a study it should be among the last, if not the very last, which should be assigned to scholars in common schools. After the mind has acquired sufficient maturity, the study of grammar may be pursued with profit, not only for the purpose of acquainting the scholar with the philosophy of language, and enabling him more perfectly to understand its force, but also by carrying him through a process of reasoning, thereby developing and strengthening the reasoning faculty.

J. P. F.

HOW TO AVOID QUARRELS. Rev John Clark, of Frome, in England, was asked by a friend how he always kept himself from being involved in quarrels; to which he replied, "By letting the angry person have all the quarrel to himself." This afterwards became a proverb in the town. When a quarrel was rising, they would say, "Come, let us remember old Mr. Clark, and leave the angry man to quarrel by himself." If the reader will always follow this rule, he will save himself a great deal of trouble, and perhaps many hard knocks. Remember, *it always takes two to quarrel*.

THE REV. R. J. BRECKINRIDGE, D. D. The Governor of Kentucky has appointed the Rev. Dr. Robert J. Breckinridge, of Fayette county, to be Superintendent of Public Instruction, in place of the Rev. Ryland T. Dillard, resigned.

Want of Courtesy.

BY MISS SEDGWICK.

The most striking and prevailing defect in the manner of Americans is, I believe, a want of courtesy. A little reflection would remove this defect. What do I mean by courtesy, and how is the want of it shown, do you ask? A few winters since, a well-bred foreigner came to the interior, and took lodgings at a village inn, for the purpose of learning the English language. To facilitate its acquisition, he generally preferred remaining in the receiving room of the tavern, where travellers were passing in and out. His writing table was placed before the fire. When the women came shivering in from a long drive in the stage coach, he moved his table to the coolest corner of the room, mended the fire, drew chairs near it, and if they brought in foot stoves or blocks, he found the best place to heat them. He then returned to his own uncomfortable seat, and pursued his reading or writing.

The women profited by his civilities without appearing to notice them. During the whole winter he never received one word of acknowledgment. Not one, "Thank you sir"—"You are very kind sir"—or what would have seemed inevitable, "Pray, don't take that cold seat sir." What was the polished stranger's inference? Certainly, that the Americans were a most discourteous, if not cold-hearted people.

I have often seen men in steamboats, in stage-coaches, and other public places, rise and give their seats to the women, and the women seat themselves quietly, without a look or word of acknowledgment. And so with a thousand other attentions which are rendered, and are received without any return. Avoid such discourtesy, my young friends—it is not only displeasing, but it is unjust. We actually owe some return for such civilities, and a courteous acceptance is, in most cases, the only that can be made. These little chance courtesies are smiles on the face of manners, and smiles are like sunshine—we scarcely have too much of either.

Effects of Encouragement.

The following happy illustrations of the influence of encouragement upon children, and of the importance of understanding a child's character and addressing him in the right way, we are unable to credit to the author. We find the extract as we give it:—

Last summer, I had a girl exceedingly behind in all her studies. She was at the foot of the division and seemed to care but little about her books. It so happened that as a relaxation, I let them at times, during school hours, unite in singing. I noticed that this girl had a remarkable clear, sweet voice; and I said to her, "Jane, you have a good voice and you may lead in the singing." She brightened up, and from that time her mind seemed more active. Her lessons were attended to, and she soon gained a high rank. One day as I was going home, I overtook her with a school companion, "Well Jane," said I, "you are getting along

very well, how happens it, you do much better now than at the beginning of the quarter!"

"I do not know why it is," she replied.

"I know what she told me the other day," said her companion.

"And what was that?" I asked.

"Why, she said she was encouraged."

"Yes here we have it—she was encouraged. She felt that she was not dull in every thing. She had learned self-respect, and thus she was encouraged."

Some twelve or thirteen years ago, there was in Franklin school an excessively dull boy. One day the teacher wishing to look out a word, took up the lad's dictionary, and opening it, found the blank leaves covered with drawings. He called the boy to him.

"Did you draw these?" said the teacher.

"Yes sir," said the boy with a downcast look.

"I do not think it well for boys to draw in their books," said the teacher, "and I would rub these out if I were you; but they are well done. Did you ever take lessons?"

"No sir," said the boy his eyes sparkling.

"Well I think you have a talent for this thing. I should like you to draw me something when you are at leisure at home, and bring it to me. In the meantime, see how well you can recite your lessons."

The boy felt he was understood. He began to love his teacher. He became animated and fond of his books. He took delight in gratifying his teacher by his faithfulness to his studies; while the teacher took every opportunity to encourage him in his natural desires. The boy became one of the first scholars, and gained the medal before he left the school. After this he became an engraver, laid up money enough to go to Europe, studied the works of his old masters, sent home productions from his own pencil, which found a place in some of the best collections of paintings, and is now one of the most promising artists of his years in the country. After the boy gained the medal, he sent the teacher a beautiful picture, as a token of respect, and I doubt not, this day, he feels that that teacher, by the judicious encouragement he gave to the natural turn of his mind, has had a great moral and spiritual effect on his character.

THE EDUCATION OF TEACHERS. The exercises of a well conducted Institute continued for two weeks may be divided into three general classes.

1. A review of the branches usually taught in common schools with exemplifications of the mode of teaching and illustrating those branches to the different classes of pupils, and of introducing general exercises, and instruction in other subjects which should be taught orally in all our schools.

2. Lectures on the classification of pupils, the theory of teaching, the duties of the teacher both as an instructor and an educator, and the best modes of governing schools, securing order, regularity in attendance, diligence in study, propriety in deportment, &c.

3. Evening lectures intended to enlarge the views of teachers, and to awaken the community to a more lively and intelligent interest in the cause of education.—*Ohio School Journal.*

THE AGRICULTURIST.

For the Vermont Agriculturist.

The Potato Rot.

MESSRS. EDITORS:—As the Rot in the Potato has made its appearance again, I send you the following. There has been so much written upon the subject, so many plausible theories in regard to its cause and cure, that I am aware the public would like an ounce of prevention rather than so much theory. The following conclusions have been the result of my own observation and experiment.

In the first place the idea that the potato all over the country has become a diseased stock remains without proof or warrant. In the worst infected districts heretofore, where they have necessarily been obliged to seed from such as they had, the facts do not sustain the theory. Ireland, for example, has a good crop of potatoes the present year, with little or no rot. So I think we may discard the notion that the only sure remedy is to begin anew and raise up new varieties from the seed balls.

My own conclusion is, that the cause of rot involves the same principles of rust in wheat—that the atmosphere is the principal agent in its spread and propagation—that certain soils and conditions of soil are more liable to receive and develop it, just as some persons are more liable to receive and develop yellow-fever or any other epidemic. In its growth almost the only communication to the potato itself is through the leaves and stalk. Through that channel it receives its entire nutriment from the atmosphere; and it makes but little difference what the root-tubers are covered with, so they are protected from the sun and wind. Cover seed potatoes with straw upon a bare rock, and you may have very good potatoes, provided the atmosphere in the immediate vicinity is impregnated with the proper gases. We observe the first appearance of rot in the leaves and stalk,—an appearance of blight. This taking place when the potato is just coming to maturity communicates the virus, which passes to the potato. The effect upon the leaves and stalk is to close the pores;—circulation becomes imperfect, or almost ceases. So the virus, confined to the potato, exudes to the surface under the outer peel, and there ferments; and the warmer the weather the faster the rot progresses. This view is sustained from the fact that even in the same hill some may be rotten and some sound.

So much for observation. Now for the experiment.

I have cultivated a small piece of ground, say one-third of an acre, with potatoes, for the last three years. The soil is loam and sand, or sandy soil, manured slightly with barnyard manure two of the years; the manure spread and plowed in, and rolled down. I then deposited with the seed, which was cut in pieces, nearly one-half pint of the following compound, viz: $\frac{1}{4}$ Plaster Paris, $\frac{1}{4}$ unleached ashes, $\frac{1}{4}$ slacked lime, and 2 quarts common salt to one bushel of the mixture. I say, I put nearly one-half pint of this mixture in each hill, and covered with the seed, about the first of May. For the whole time we have not seen one rotten potato produced there. We are now

on the 3d crop; and there are adjoining, with only a board fence between, on soil precisely the same, potatoes which are already one-fourth rotten. But they were cultivated without the compound. I have little doubt that one of these two things, or both combined, produced the difference. The compound, or the time of planting. Those rotting were planted about the first of June. Furthermore, I have a piece planted from the very same seed on a clayey, gravelly soil, without the compound; and they are rotting. So, asking pardon for saying so much and so awkwardly, I come to the conclusion that the earth, *inland* especially, is not sufficiently salted, or from continued cultivation, the salt has 'lost its savor.'

Respectfully yours,

G. H. R.

Milton, Vt., Sept. 18, 1847.

REMARK. About a half-pint of salt and soot, say one-third salt, applied as a top-dressing, has not prevented the appearance of the rot on the premises of one of the Editors. This is a greater quantity of salt than our correspondent's compound contained.

For the Vermont Agriculturist.

Composts.

"According to the experience of Mr. Phinney of Lexington, an authority which may not be questioned, a cord of green dung converts twice its bulk of peat into a manure of equal value to itself—that is, a cord of clear stable dung composted with two of peat, forms a manure of equal value to three cords of green dung. Indeed the permanent effects of this compost, according to Mr. Phinney, exceed those of stable dung."—*Dana's Muck Manual*.

"You may rely upon the fact that alkali and swamp muck form a manure, cord for cord in all soils equal to stable dung. By calculating on the proportion of mould in fresh dug swamp muck or peat, it may be stated as a rule grounded on the quantity of quickening power in a cord of stable manure, that every cord of swamp muck requires eight bushels of common ashes, or thirty pounds of common potash to convert it into manure equal cord for cord to that from your stable. Dig up your peat in the fall, let it lay over winter to fall to powder, calculate your quantity when fresh dug, and allow nothing for shrinking in the spring when your alkali is to be well mixed with the mould, and after shoveling over for a few weeks use it as you would stable manure.

These quantities of ashes and alkalis are the lowest which may be advised and three or four times that amount may be used to advantage and the compost may be applied to any soil light or heavy. But there is another form of this same muck and alkali which should be used only on light loamy, sandy soils, to produce its greatest benefit, though even on heavy soils, if not very wet, it may be used to great advantage. This is a compost of one cord spent (leached) ashes, to three cords of muck. This is decidedly the best mixture which has yet been tried. We have in this all that mixture of various salts and mould which plants require, and both by the action of the mould and by that of the air, the alkali of the spent ashes,

which no leaching would extract is soon let loose, and produces all the effects of so much clear potash or soda."—*Dana's Prize Essay on Manures.*

"The carcass of an animal weighing 100 pounds evenly and well mixed with a cord of fresh dug muck, will make a cord of manure containing all the elements, and their amount too, of a cord of dung. The carcass of a horse converts and fertilizes 5 or 6 cords of swamp muck."—*Id.*

Hence, any one can calculate the value of a dead horse after the hide and shoes are taken off. Instead of being buried up in muck or mould, and thus rendered profitable as manure, dead horses are usually left to

"Waste their sweetness in the desert air."

A writer in the *Southern Planter* recommends the following plan:

"Have a pit 30 or 40 feet square and 2 or 3 feet deep with a good bank around it. In this pit put leaves, straw, suds or soil, in suitable layers, on which throw all the slop-water, soap-suds, contents of chambers, in short every thing that can be conveniently got together. It may be at any convenient distance from the kitchen so that soap-suds, slop-water, &c., may be conducted to it by a trough—and suffer no water to get into it in any other way. If at any time it should become offensive, start your teams immediately and cover it with leaves or earth sufficient to prevent the escape of the effluvia. Occasionally sowing it over with plaster would improve the heap."

Wm. Todd of Utica, Maryland, writes, "I have long been of the opinion that every man who is the owner of 100 acres of land ought to keep a man and team six months in a year collecting matter for manure into the barn-yard. These matters should be leaves, suds (especially when the grass is long) from the fence rows, scrapings from the roads or streets, collections from ditches or ponds. He should use sand where the land to be improved is heavy clay, and clay where the land is sandy. No money expended on a farm will pay so well as that laid out in making compost in the barn-yard where the contents of the stable are collected and made into one great pile."

—*Albany Cultivator.*

Wm. H. Adams's statement:

"In the management of my stable manure, I have thought it best to use that kind of soil with manure that would apply best to my land. Most of my land being low swamp land, I have taken my soil from high loamy land, in the proportion of 2 or 3 loads of soil to one of manure. Where I have yarded my cows this season, I covered the ground 3 or 4 inches deep with soil, using the same kind of soil that I did with my stable manure. I have thrown up my manure almost every day into piles, mixing in soils. This keeps it from drying, and well pays the expense. The amount of stock on the place has been 8 horses, 14 cows and 12 hogs, on an average. The number of loads carried out since last spring amounts to 373 and 39 feet."

Returns of Ag. Soc. Mass., 1846.

Bridgewater, Oct. 14, 1846.

Orsamus Littlejohn's statement:

"I had 32 loads compost manure for my orchards.

It was floats dug up around rotten stumps in the woods and put in heaps the year before. They were carted to the field and two hogsheds salt ley added and shoveled over. This was well rotted and proves first rate.

"I have used on my reclaimed meadows 88 loads made of mud three-fourths, coal-dust one-fourth, which had seven large ox wagon loads of hog and horse manure added. It was cut over twice and found quite warm each time. It was spread August 6 and 12, and I have this day, Sept. 17, cut a good swath where it was used.

"I made other compost heaps in the field with my green barn dung that was mixed with refuse corn butts, urine, &c., which was used on grass, and proves very good. This last must have cost something less than the above. It was more than two-thirds soil, and yet this was heated enough to rot the whole.

"My other compost heaps were made up in the barnyard,—every variety of materials that could be collected were used, muck, soil, coal-dust, straw, pine needles, ashes, lime, plaster, salt, soap-suds from the wash tubs, sink and back-house manures, dung, urine from the stock carefully saved. These materials were mixed and laid up with a shovel as light as possible while they were quite wet in rows from 3½ to 4 feet high. These heaps began to ferment in less than three weeks, and at the end of six weeks were ready for any soil or crop. The labor in collecting materials, cost about 6 cents per load and the cutting over two cents, and the carting out five cents."—*Id.*

The above are among the various methods of composting manures, practiced by successful farmers.—But the objection is made "I am too poor to practice these methods,—if I were rich I should adopt some of the plans proposed." I think this is a wrong position. It is by practicing on these improved plans, beginning at first in a small way and gradually increasing, that any of our farmers have become wealthy. If they had made the same excuse, they would still have been poor, but by improving every plan for collecting materials and composting manure, and thus improving their farms, and by industry and a judicious enterprise, they have obtained a competence, and in some cases an abundance. And any farmer by pursuing the same course may arrive at the same results. The fall is a favorable time for collecting materials, and if a day is a little dull or even drizzly, if improved in this way the wages will be reckoned by dollars another year.

AGRICOLA.

Solvent Action of Rain-Water on Soils.

In the autumn of 1844, it occurred to John Wilson, Esq., of East Lothian, where the system of thorough drainage is very extensively carried out, that the drainage-water during its percolation of the soil must necessarily dissolve out and carry away a great portion of soluble constituents of it, which, by the practice as at present followed, are carried off the land and consequently lost to the farmer. He accordingly, between that time and the following spring, took advantage of the fall of rain, subjected several samples of

drainage-water he had collected, to chemical analyses, the results of which were quite sufficient to show that his conjectures were well founded. During the autumn there fell about the usual quantity of rain. On the 16th of May, 1845, he collected some drainage-water, from a field which had lain plowed in winter fallow, having been prepared, a few days before, for seed, and sown with guano and barley. From this sample of water, 18 lbs., on evaporation, gave 27½ grains of solid residue, or about 8.44 grains to the pound, which were composed of the following ingredients:—

	Grains.
Organic matter, &c.,	7.8
Silica,	0.7
Silicate of alumina,	0.2
Peroxide of iron,	2.25
Phosphate of Magnesia,	1.8
Magnesia,	1.69
Chloride of Sodium,	2.615
Chloride of calcium,	2.107
Carbonate of lime,	2.7
Phosphate of lime,	3.1
Phosphate of alumina,	0.45
Loss,	2.088
	37.5

From the above experiment it would appear to be expedient for the farmer to avoid using large quantities of soluble manures, at a time, on porous leachy soils; and instead of giving his land sufficient manure to last two or three seasons, to divide the quantity, and apply it in as small a proportion and as frequently as the nature of his crops will permit.—*Condensed from the Philosophical Mag.*

Nurserymen's Convention.

We observe by a late number of the Ohio Cultivator, that it is proposed to hold a general meeting of Nurserymen and Fruit-growers, at Columbus, on the 29th and 30th September inst. The main object is, to bring together specimens of all the approved varieties of Apples, (and other fruits of the season,) cultivated in different sections of Ohio and adjoining States, in order to afford opportunities for examining and comparing them, and correcting in some degree at least, the erroneous names under which many of them are now cultivated.

Other objects of the proposed convention are, to bring into notice such new varieties as may have originated in this region of country, and are deemed worthy of cultivation—to consult together on the subject of the selection of varieties for different sections of the country, and different soils; also, the best mode of cultivation, the nature and prevention or cure of diseases of fruit trees; and generally to discuss such matters as may be thought useful and interesting to nurserymen and fruit-growers, and tend to promote the general cultivation of fine fruits throughout the country.

Such a meeting of nurserymen and fruit-growers may result in much good, and as all engaged in the production of Fruits are invited to be present, it is to be hoped that the convention will be a large one.—*Cincinnati Gazette.*

Estimate of the average Prices

Of wheat, Indian corn, oats, and potatoes, per bushel, from 1840 to 1846 inclusive, in each of the United States, at the nearest market towns to the places of production, to which the same may be taken, without any expense to the producer, except his own labor and the use of his teams:

	Wheat.	Ind. Corn.	Oats.	Potatoes.
New England States.				
Maine,	\$ 1.12½	0.66½	0.33½	0.20
New Hampshire,	1.12½	0.62½	0.33½	0.20
Vermont,	1.12½	0.62½	0.30	0.20
Massachusetts,	1.12½	0.66½	0.33½	0.25
Rhode Island,	1.12½	0.62½	0.33½	0.25
Connecticut,	1.12½	0.62½	0.33½	0.25
Middle States.				
N. York—South Dist.	1.12½	0.62½	0.33½	0.25
do. North do.	0.87½	0.45	0.30	0.20
New Jersey,	1.12½	0.62½	0.33½	0.25
Penn'a—East Dist.	1.12½	0.62½	0.33½	0.25
do. West do.	0.87½	0.40	0.25	0.20
Delaware,	1.00	0.60	0.33½	0.25
Maryland,	1.00	0.50	0.33½	0.25
Southern States.				
Virginia—East Dist.	1.00	0.50	0.33½	0.25
do. West do.	0.50	0.15	0.15	0.20
North Carolina,	1.00	0.40	0.30	0.20
South Carolina,	1.00	0.30	0.30	0.20
Georgia,	1.00	0.25	0.30	0.25
Alabama,	1.00	0.25	0.30	0.30
Florida,	1.12½	0.30	0.30	0.30
W. & S. W. States.				
Mississippi,	1.12½	0.25	0.30	0.25
Louisiana,	1.12½	0.37½	0.33½	0.40
Arkansas,	1.00	0.25	0.30	0.25
Tennessee,	0.50	0.15	0.15	0.20
Kentucky,	0.50	0.15	0.15	0.25
Missouri,	0.40	0.15	0.15	0.20
Ohio,	0.55	0.20	0.15	0.15
Indiana,	0.45	0.15	0.15	0.15
Illinois,	0.45	0.15	0.15	0.15
Michigan,	0.55	0.25	0.20	0.15
Wisconsin,	0.45	0.20	0.15	0.15
Iowa,	0.40	0.15	0.15	0.15

Seaman's Progress of Nations.

The slow transmission of heat through loosely coherent clay and sand, was tested recently in England, by an experiment in which a thickness of half an inch of such matter intercepted the heat of a mass of 11 tons of white-hot melted cast iron for 20 minutes without the heat on the outside of the vessel being sufficient to pain the hand.—*Scientific American.*

IMPROVEMENT IN CLEANING WHEAT. We have received an interesting account of an improvement in the mode of preparing wheat for the mill, devised by Mr. Bentz, of Boonsboro', Md. By the present method, in grinding, particles of the bran become mixed up with the meal, which, giving it a speck appearance, renders the flour of inferior value. In removing this, much is wasted, in addition to the extraneous labor expended in the operation. Mr. Bentz obviates all this, by first removing the bran, and of course with it all ex-

terral impurities, by an operation of his own invention—and after this pure and marketable flour may be obtained.—*Baltimore Patriot*:

From the (London) Farmer's Magazine.

Nutritive Qualities of Bread now in Use.

I have had occasion during the course of many years to pay strict attention to the processes of bread-making, and am therefore prepared to enter upon a subject which the existing state of the country renders of peculiar interest. The title of this article has been adopted in order to embody the leading points of a masterly paper that has lately appeared from the pen of Professor Johnston, of the Edinburgh Society, than whom we do not possess an analytic chemist of higher and more trustworthy qualifications. The orders of Queen Victoria in reference to what is styled "second bread," and the laudable zeal with which several noblemen of high rank have adopted similar resolutions, require particular notice, inasmuch as the term "second bread" is of doubtful meaning, and likely to be misunderstood, especially in country districts, where it conveys a definite unfavorable meaning.

The flour of wheat is in England of three or four varieties. The first, by way of distinction called "white," is used in families for the best pastry, or by bakers to prepare the finest fancy and cottage loaves. The second variety is the "household" flour used in the ordinary baker's household loaf. The third is employed to make seconds bread, which is generally sold at 1d. per loaf of 4 lbs. less than the prime household. There is inferiority of some description in this second flour of the mill; but it does not consist in the retention of the pollard, or fine portion of the skin. The country miller, and the families who there bake their own bread upon economical principles, are well advised as to the true meaning of these distinctions. And here, therefore (though the terms of the North may in some slight degree differ from those employed in our agricultural counties), I may appeal to the authority of Professor Johnston, as I practically know that all he says on the subject is strictly correct—thus:

"The grain of wheat consists of two parts, with which the miller is familiar—the inner grain, and the skin that covers it. The inner grain gives the pure wheat flour, the skin when separated forms the bran. The miller cannot entirely peel off the skin from his grain, and thus some of it is unavoidably ground up with his flour. By sifting he separates it more or less completely; his seconds, middlings, &c., owing their color to the proportion of brown bran that has passed through the sieve along with the flour. The "whole meal," as it is called, of which the so-named brown household bread is made, consists of the entire grain ground up together, used as it comes from the mill-stones, unsifted, and therefore containing all the bran."

A fourth sort is used in Berkshire, and indeed in all country districts where families purchase or grow their own wheat and send it to mill: it is called "farmers' grist," or "one-way flour," and contains all the finer portions of the pollard or middlings, after the

separation of the coarse bran only; this true wheat flour makes the best bread that can be produced—wholesome, nutritious, of a beautiful clear yellowish white, and of surpassing flavor. It is very economical to the family, especially if the dough be made up with water in which the bran has been infused. But every sack of the best wheat, weighing 240 lbs., yields somewhere about 40 lbs. of excellent bran, abounding with meal, so much is abstracted from the corn, and barely 200 lbs.—say rather 196 lbs.—remain to the baker. Now we safely infer that the orders of Her Majesty refer to the best farmers' grist, in contradistinction from the extravagant products of the mill, called "whites" and household flour, from which the miller's cloth has removed all the pollard. But in times of real scarcity the entire meal claims our attention, excepting in particular cases where coarse bran is found insalubrious to individuals. Here again we appeal to the philosophical authority of the Professor. "The solid parts of the human body," says Mr. Johnston, "consists principally of three several portions—the fat, the muscle, and the bone. These three substances are liable to constant waste in the living body, and therefore must be constantly renewed from the food we eat." "Again, the fluid parts of the body contain the substances in a liquid form, on their way to or from the several parts of the body in which they are required. They include also a portion of salt or saline matter that is also obtained from the food." "It is self-evident that that food must be most nourishing which supplies all these ingredients of the body most abundantly on the whole, or in proportions most suited to the actual wants of the individual animal to which it is given."

I have stated that a sack of wheat loses in bran 40 lbs. Professor Johnston forms his estimate lower, thus:

"The amount of husk separated by the miller, and which is not sold for human use, varies much; I do not overestimate it when we consider it as forming one-eighth of the whole. On this supposition eight pounds of wheat yield seven of flour, consumed by man, and one of pollard and bran, which are given to animals—chiefly to poultry and pigs. If the whole meal be used, however, 8 pounds of flour will be obtained, or eight people will be fed by the same weight of grain which only fed seven before.

The calculation, however, is too low; for thirty pounds of coarse bran only, to say nothing of the pollards, is far below the quantity abstracted from a sack of wheat. The greatest economy of product is unquestionably affected by the use of entire flour made from white wheat, and the quality made from that material is excellent. Such bread is obtained at Croyden; it is sweet and pure in flavor, far from brown in color, and is perfectly salubrious; the cost from 1d. to 1½d. below that of the household loaf. Presuming, then, that the flour from the sack of white wheat weighs 236 lbs., inclusive of the bran, then, if one-third be added for the water imbibed and retained in the bread, the yield of every such sack will be more by a fraction than 314 lbs.—a consideration of immense importance during periods of real or even of

imaginary scarcity, when the prices become distressingly high.

The assimilative qualities of wheat now must be considered, and herein Mr. Johnston's analyses and report must be consulted. We have already seen that he classes the solid parts of the human body under three heads—fat, muscle, and bone; and he follows up the subject thus by inductive reasoning:

"What is the composition of pure white flour which contains no bran, and what the composition of whole meal? How much of each is also contained in the whole grain?"

"1. *The Fat*.—Of this ingredient a thousand pounds of the

Whole grain contain	28 lbs.
Fine flour	20 "
Bran	60 "

So that the bran is much richer in fat than the interior part of the grain; and the whole grain ground together (whole meal) is richer than the finer part in the proportion of nearly one-half.

"2. *The Muscular Matter*.—Numerous experiments have been made in my laboratory to determine these proportions in the fine flour and the whole seed of several varieties of grain. The particular results in the case of wheat and Indian corn were as follows:

A thousand pounds of the whole grain and of the fine stock contained of muscular matter

Wheat in the whole grain	156 lbs.	In fine flour	130 lbs.
Indian corn	140 "	"	110 "

Here, then, is a marked predominance of the ingredient of strength and power in favor of the entire flour of either grain.

"3. *Bone Material (phosphate of lime—bone phosphate) and Saline Material*.—Of these mineral constituents, as they may be called, of the animal body, a thousand pounds of bran, whole meal, and fine flour contain respectively

Bran	700 lbs.
Whole meal	170 "
Fine flour	60 "

So that, in regard to this important part of our food necessary to all living animals, but especially to the young who are growing, and to the mother who is giving milk, the whole meal is three times more nourishing than the fine flour."

If any credence be attached to chemical analyses, and in particular to a chemist so thoroughly practical as Professor Johnston, the case of the superior value of whole meal bread is absolutely made out; and it would be found a circumstance of inestimable value to the entire community were there a legislative enactment to the effect that no bread should be publicly baked and sold that was not made either from entire flour, or from the farmers' "one-way" grist before described. The latter, indeed, appears to be the quality of the bread by misconception termed "second;" and I can venture to assert that the loaf prepared from flour of a quality so pure and genuine as that obtained from the mill-ground "one-way" would bring thousands of converts to the opinion now so boldly, and with truth, advanced by Mr. Johnston.

As a farther confirmation of this theory, one more Table of calculations is added; it is therein stated that "a thousand pounds of the three substances con-

tain of the three several ingredients the proportions of

	Whole Meal.	Fine Flour.
Muscular matter,	156 lbs.	130 lbs.
Bone material,	170 lbs.	90 lbs.
Fat,	28 lbs.	20 lbs.
Total in each,	354 lbs.	240 lbs.

Taking the three ingredients, therefore, together, the whole meal is one-half more valuable for fulfilling all the purposes of nutrition than the fine flour."

I have not as yet noticed the true brown bread of the farm; for although a brown mottled tint obtains in the bran or entire meal loaf, yet that differs materially from the genuine brown bread, which can be only produced by the farmers' grist, ground from red or dark-skinned wheat, wherein every particle of the coarser pollard is retained by the mill-cloth employed for the express purpose.

I conclude this article by an appeal to the final and conclusive arguments with which Professor Johnston supports his theory, and to its applicability in especial to the far-famed oatmeal of the North.

"The Deity has done far better for us, by the natural mixtures to be found in the whole seed, than we can do for ourselves. The materials, both in form and proportion, are adjusted in each seed of wheat in a way more suitable to us than any which with our present knowledge we appear able to devise.

"The oat is more nutritive even than the whole grain of wheat, taking weight for weight. For the growing boy, for the hard working man, and for the portly matron, oat-meal contains the materials of the most hearty nourishment. This it owes in part to its peculiar chemical composition, and in part to its being, as it is used in Scotland, a kind of whole meal."

Many persons object to oatmeal on the ground of its possessing heating properties—referable to the comparative high proportion of its oily material. Let us admit the fact; but in that case I must be permitted to recommend the use of oatmeal most particularly to persons of spare or meagre habit. At all events they who know what true "round" oatmeal really is, must prefer it to every other variety. I ascribe its superior excellence to the admirable method of kiln-drying, obtained by experience; and as, through the kindness of a friend, I possess a quantity of the meal received direct from Edinburgh, I can honestly recommend it as incomparably superior to anything that is sold as oatmeal by our English corn-dealers.

JOHN TOWERS.

TOO GOOD A SOIL. At the meeting of the Royal Agricultural Society of Ireland, the other day, the Earl of Erne observed:—"A good providence has blest us with a most fruitful soil, a land flowing with every thing to make it productive, which, I am sorry to say, we have not turned to our advantage as we should have done, either through want of energy or lack of knowledge. I have always said and still maintain, that one of the chief reasons why we are such bad farmers is, that our land is too good. We merely scratch the top of the ground, which enables it to produce half a crop and with which we are content; but we never sink deep into the earth, so as to get the full

benefit. The very contrary is the fact in Scotland; the land there is not so good, and the farmers were compelled to put their wits as well as their hands to work, and be it to their honor said, and I believe I may state it without fear of contradiction, that Scotland, has become a model of farming to the world."—*Liverpool Times*, Aug. 19.

Setting out Trees.

The season for transplanting trees during autumn, will commence ere long, and a few hints upon the subject, at this time may not be premature.

We like the season of autumn rather the best for transplanting fruit trees, and most of the ornamental trees, for the following reasons, viz: We generally have more time to perform the operation, and of course can set out more and do it better, than if hurried with a pressure of business, as most of us are in this State, when our spring seasons are short, and the transition from winter to summer rapid.

The trees themselves, if properly placed, get "settled," as we Yankees say, and are all ready to take as early a start in the spring, as any others. As soon as the frost comes, and the growth of the season becomes checked, you may commence operations—and it is a very good plan to divest a tree of its leaves, by picking them off, if any remain. They will not then act as *pumps* to start any circulation of the sap which the roots will not be able to supply, any length of time, without being firmly placed in the soil, so as to obtain, by its spongioles, suitable material for a supply.

About three years since, a communication was published in Hovey's Magazine, by Captain Josiah Lovell, of Beverly, on the subject and mode of transplanting trees in autumn, which we have found to be a very good mode. Capt. L. is a retired sea captain, and we have found that sailors oftentimes make very excellent, exact, methodical farmers, when they

"Leave plowing the deep,
And go plowing the land."

We extract from his paper the following directions:—

"I have found it best in my soil, which is mostly a clay loam upon a subsoil of stiff clay, to transplant strawberries in August; pear, plum, and apple trees, together with currant and raspberry bushes, in the latter part of summer or early in autumn.

Thus far I have been most successful in those earliest transplanted, say from the 20th of August to the last of September, according to the season. The best time is immediately after the usual summer drought, when the summer growth of wood has ripened. I prepare my ground by taking out two spadings of soil, keeping the top spading to mix with roots, making the hole at least a foot more in diameter than the extent of the roots of the tree. I then drive a single stake in the position in which I intend the tree to stand, not allowing the top of the stake to appear more than four inches above the surface of the ground. If the bottom soil is not rich, on replacing it I mix a good quantity of well rotted manure (a few old bones or bone dust will do well here) with it; I fill with this to within four inches of the lower roots, and

then use my top soil, laid aside for that purpose, to the roots.

Previous to taking up the bush or tree to be transplanted, I remove every leaf, by cutting them off with sharp scissors; I take up every tree, in the morning of a clear day, and place the roots in a tub of soap suds, saved from the last washing day, let them remain there till afternoon, (twenty-four hours will not injure them.) The sun having warmed the ground, I place the tree in its position, with a wisp of straw between it and the stake, and secure it well to the stake with good bass or Russia matting, both below and above the straw; you then have a good tap root in the stake to secure against all winds and frosts, and nothing to chafe either the body or the limbs.—Now fill up with top soil or earth, in the usual manner, observing to have it well pulverized, to do which there is no difficulty at this season of the year. The soil must be pressed well up under the main roots and about the heel of the tree. All the roots should be spread carefully out, in their natural position, and the earth pressed down over each layer of roots, covering the top roots not more than four inches deep, treading gently round, to press the top soil about them; every broken root should be cut off with a sharp knife.—Late in autumn, say November, a little more soil may be thrown over to protect the roots in winter, and removed in spring."

By setting so early, the captain obtained quite a growth of root before the winter set in. He mentions that "in several instances, after planting thus early, I have examined the roots in November, and invariably found that they had made new rootlets; in one instance, (says he) having to remove a pear tree on quince stock, in November, after having set it out the first of September, I found that it had made new roots nearly a foot long."

He also recommends that great care be taken not to set the roots too deep, particularly on moist or adhesive soils. Should the drought effect them, on light dry soils, a half peck to a peck, according to the size of the tree, of unleached wood ashes, placed round, from the body of the tree to the distance of four feet, and well watered, will effectually prevent any injury from drought.—*Maine Farmer*.

Light in Stables.

Most people seem to think that light is little wanted in a stable; and truly, after all the horses have become blind for want of it, there is not much need for windows. There is in general some kind of apology for a window. There may be a pane or two of glass above the door, or a hole at one end of the stable.—When the man is working he has light enough from the door; and the horses have the benefit of that.—Besides it is said, horses do not require light. They thrive best in the dark!

From these and similar abuses, innovations always meet with some resistance. Some miserable plea is offered in favor of an old usage, merely to avoid open conviction of ignorance. Dark stables were introduced not because men thought them the best, but be-

cause they had no inclination to purchase light, or because they thought the horse had no use for it.

A horse was never known to thrive better for being kept in a dark stable. The dealer may hide his horse in darkness, and perhaps he may believe that they fatten sooner than in the light of day. But he might as well tell the truth at once and say, that he wants to keep them out of sight till they are ready for market. When a horse is brought from a dark stable to the open air, he sees very indistinctly; he stares about him, and carries his head high and steps high. The horse looks as if he had a good deal of action and animation. Dark stables may thus suit the purposes of dealers, but they are certainly not the most suitable for horses. They injure the eyes. There is not perhaps another animal on earth so liable to blindness as the horse. It can not be said with certainty that darkness is the cause; but it is well known that the eyes suffer most frequently where there is no light.

Whether a dark stable be pernicious to the eyes or not, it is always a bad stable. It has too many invisible holes and corners about it ever to be thoroughly cleansed. The gloomy dungeons in which boat and coach horses are so often immured, are always foul. The horses are attended by men who will not do their duty if they can neglect it. The dung and the urine lie rotting for weeks together, and contaminating the air till it is unfit for use. The horses are never properly groomed. They cannot be seen.

All these things considered, it is evident that the stable ought to be well lighted, and that the expense attending it is a prudent outlay. When side windows can not be conveniently introduced, a portion of the hay-loft must be sacrificed, and light obtained from the roof. This, in ordinary cases, will not be greatly missed. Let it be well done if done at all.—*Stewart's Stable Economy.*

RUSSIA AND THE CORN TRADE. The Russian Government has given orders to the great iron foundry at Searing, for the construction of steam engines for the navy, which are now being conveyed by steamers to St. Petersburg, and a number of Belgian, Dutch, and German shipbuilders have been engaged. The step of the Russian Government is one of high importance to commerce. Steamers are to be constructed for the Wolga, which traverses Russia from north to south, and flows into the Caspian Sea, and by the Sus Canal is connected with the Lake of Ladoga and the Gulf of Finland. By the navigation of the Wolga by steamers the two seas will be connected—a thing which was formerly thought impracticable. This will enable Russia to bring her corn and valuable timber from the inland Provinces to the market; a steam navigation is not to be confined to the Wolga, but is to extend to the Don, the Duna, the Dnieper, and the Bog. Ukrania, Tauris, Bessarabia, Great Russia, West Russia, and the East Sea Provinces will, in time, exercise a greater influence upon the European corn market than America at the present moment. Many thousands sterling now find their way into Russia, but that is nothing to what will take place some years hence. If Russia had possessed

steamers on her rivers, the late scarcity in Europe would not have been felt as it has been. The clear perception of the Emperor at once detected the root of the evil, and the means for advancing the commercial interests of his country; and the powerful mind that conceived the idea is capable of carrying it out.

The Markets.

BRIGHTON MARKET, Monday, September 20.

At market, 2200 head of Cattle, (including 1350 Stores), 13 yokes Working Oxen, 40 Cows and Calves, 3000 Sheep, and about 2250 Swine. Large number of cattle unsold.

Prices—*Beef Cattle*—First quality, \$6 50; second, \$5 75; third, \$4 to \$5.

Working Oxen—Sales noticed at \$78, 82, 90 a \$110.

Store Cattle—Sales were noticed, 2 year olds at \$14 a 16.

Cows and Calves—Sales made at \$19, 21, 24, 33 a \$45.

Sheep—Sales brisk. Old Sheep in lots from \$1 75 to 2 75. Lambs from \$1 50 to 2 50.

Swine—Sales at wholesale. Old Hogs, 51. Shoats retail from 51 to 61 a 7c.—*Traveller.*

LIVERPOOL AMERICAN PROVISION MARKET. September 3. Sales *Beef* limited; supplies, however, falling off, which lead to a greater demand and brisker markets. Pork in better request. Cheese—A really fine article is much wanted. A sweeping demand for Lard, sales exceeding 300 tons; we quote an advance of 2 to 3s. per cwt. with stock much reduced.

LIVERPOOL CORN MARKET. September 4. Our Corn market, since 19th ult., has experienced again a serious decline of prices. The top price of the best of wheat was at that time quoted at about 67 to 68s. per qr., the same quality will not command at this moment more than 55s., whilst the best American flour in Liverpool barely sells at 25s. per bbl. In Indian Corn the losses to importers will be enormous. The price of best Indian Corn in Liverpool is not higher than 28 to 32s. per qr. of 480 lbs. This article has been in extensive demand for feeding cattle; and large quantities, damaged, we know to have been taken for purposes of manure, at prices below the current value of guano.—*European Times.*

[Circular of Messrs. Baring Brothers & Co.]

LONDON, Friday, Sept. 3. Corn—The arrivals of Foreign have been immense, while the stocks in granary are unprecedentedly large; this added to the heavy failures, has caused a complete panic in the trade, and even at the following nominal prices little progress could be made in sales. Flour, 23 and 24s. per bbl. superfine best brands, 20 and 22s. inferior and sour; Indian Corn, 26 and 30s. per 480 lbs.

BOSTON, Sept. 27. FLOUR—The market continues to sustain an active demand, and prices are fully supported; Genesee, fresh ground, from old wheat, commands \$6, and new wheat, \$6 061 and \$6 124; Michigan, fresh, \$5 87 and \$6 per bbl.; Ohio, \$5 75 and \$6.

PROVISIONS—The market for *Mess Beef* is still tending downwards, though the demand for home trade and Eastern ports has been pretty active; sales at \$13, on time; and Prime \$9 and \$9 50 do. *Mess Pork* \$15, and Prime \$13 per bbl.; Lard in barrels, 104, and kegs 124c.; an entire parcel of 600 kegs sold for export at 124c. per lb. 4 months credit.

Potatoes—Chenango, cargo,	bush.	40	a	45
do White do		20	a	30
Butter—shipping order,	lb.	14	a	17
do store,		13	a	16
do family, prime,		18	a	22
Cheese—shipping,		6	a	7
do new milk,		7	a	8
do four meal,		5	a	6

WOOL—There is no change to notice, with a steady demand.

Prime Saxony Fleeces, washed,	lb.	45	a	50
American full blood, do		40	a	45
do 3-4 do		35	a	38
do 1-2 do		31	a	33
do 1-4 and com. do		27	a	30
Buenos Ayres, unpicked,		6	a	14
Extra Northern pulled lamb,		38	a	40
Super. do do do		33	a	35
No. 1 do do do		28	a	30
2 do do do		19	a	20
3 do do do		14	a	15

—*Courier.*

Advantages of Transporting Live Stock on Railroads.

It is estimated that the average loss on all distances by driving, and consequent saving by conveyance on railway, is 5 lbs. per quarter for bullocks, or 20 lbs.; 2 lbs. per quarter, or 8 lbs. for sheep; and 2½ lbs. per quarter, or 10 lbs. for hogs. This is believed to be a low estimate. Mr. H. Handley, one of the heads of the agricultural interest, calculates the loss on driving from Lincolnshire to London, say 100 miles, at 8 lbs. in weight, and 15s. to 30s. in money for sheep. The time for sheep he calculates at 8 days for getting up to market, which is equivalent to three or four market days, during which the chances of the market may be much affected. The promoters of the Northern and Eastern Railway, in their prospectus, calculate the loss on driving a hundred miles, at 40s. for bullocks, and 5s. for sheep. They estimate the supply of the London market at 150,000 beeves and 1,500,000 sheep per annum, the saving on which, by railway conveyance, they set down at £675,000. This saving might be fairly taken at 40 lbs. for bullocks, 8 lbs. for sheep, and 20 lbs. for swine; which would give a gross saving of pounds of animal food on the present number conveyed on railways, as follows: on 220,000 cattle, 8,800,000 lbs. of beef; on 1,250,000 sheep 10,000,000 lbs. of mutton; on 550,000 swine, 11,000,000 lbs. of pork. This would give a total of 29,800,000 lbs. of animal food economized, even at the present moment, in the infancy of the railway system.—*Railway Register*.

TO MEASURE HAY IN THE MOW OR STACK. More than twenty years since I copied the following method of measuring hay from some publication, and, having verified its general accuracy, I have both bought and sold hay by it, and believe it may be useful to many farmers, where the means of weighing are not at hand.

"Multiply the length, breadth, and height into each other, and, if the hay is somewhat settled, ten solid yards will make a ton. Clover will take from 11 to 12 yards for a ton."—*Albany Cultivator*.

FATTENING POULTRY. It is asserted in the "Transactions of the Society of Arts," that there is a great advantage in fattening geese, turkeys, and, in short, fowls of every description, on potatoes mixed with meal. On this diet they are said to fatten in less than one-half the time ordinarily required to bring them to the same condition of "excellence," on any kind of corn, or meal itself. The potatoes must be boiled and mashed fine while they are hot, and the meal added, just before the food is to be presented.

ORDER OF AGRICULTURE. The King of Prussia has just created an order destined exclusively to agriculture, that is to say, to cultivators and persons who distinguish themselves in this department of industry. The decoration bears on one side the effigy of the King of Prussia, on the other the motto, "for agricultural merit," surrounded with a crown of wheat, with vine and olive leaves. The exergue bears the

name of the designer. These classes are to be established in this order: The King reserves to himself the exclusive right to distribute the order of the first class; the second and third will be granted to farmers presented by the College of Economy. The distribution will take place annually, on occasion of agricultural festivals, and the solemn sessions of Agricultural Societies in the Prussian Monarchy.

DEFINITION OF NOBLE BIRTH. No man, says Seneca, is nobler than another, unless he is born with better abilities and more amiable disposition. They who make such a parade with their family pictures and pedigrees are, properly speaking, rather to be called noted or notorious, than noble persons. I thought right to say thus much, in order to repel the insolence of men who depend entirely upon chance and accidental circumstances for distinction, and not at all on public services and personal merit.

The air in the lungs is exposed to 170,000,000 of cells, having a surface thirty times that of the body, and during respiration the air is deprived of oxygen and becomes loaded with deadly carbonic acid gas and rendered totally unfit for a second respiration, being in reality no longer atmospheric air but a poisonous gas.

Domestic Economy.

TO TAKE MILDEW OUT OF LINEN. Rub it well with soap, then scrape some fine chalk, rub that also on the linen, lay it on the grass, and as it dries, wet it a little, and the mildew will come out in thrice doing.—*Anon*.

TO PURIFY HONEY. Expose the honey to frost for three weeks, in some place where neither sun nor snow can reach it, and in a vessel of wood or other substance, which is not a good conductor of heat.—The honey is not congealed, but becomes clear.

NUTRITIOUS BREAD. Boil half a pound of rice in three pints of water, till the whole becomes thick and pulpy. With this and yeast, and six pounds of flour, make your dough. In this way, it is said, as much bread will be made, as if eight pounds of flour, without the rice, had been used.—*Am. Agriculturist*.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy,	- - - - -	50 cents.
5 copies, sent to one address,	- - - - -	2 00
10 " " " " "	- - - - -	3 00
16 " " " " "	- - - - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

☞ Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. I.

WINDSOR, VT., NOVEMBER, 1847.

No. 7.

THE SCHOOL JOURNAL.

For the School Journal.

Errors in Pronunciation.

To enumerate the words improperly pronounced in our schools would be too tedious a task, and, even though it were practicable, it would occupy space in your valuable Journal, that might, perhaps, be more profitably employed. Still, if such errors could be classified, if a few principles could be laid down which affect whole classes of words, a conner of your paper, it seems to me, could hardly be more usefully employed. Allow me to make an attempt towards the attainment of so desirable an object.

First, then, I would lay down as a rule that admits of an exceedingly few exceptions, that vowels in the syllables that precede and follow the accented syllable, uniformly take the *obscure sound*. This sound differs entirely from the *short sound* given by Walker. It is entirely unnoticed by that orthoepist. It is the same, or very nearly so, in all the vowels, more nearly resembling the short sound of u than any other in the language. Its striking resemblance in the different vowels will be readily observed in the final syllables of the following words :

Altar, alter, elixir, actor, sulphur, any.

This rule is constantly violated in the schools, and but too frequently in the pulpit, until the minister becomes exclusively engaged with his subject. So long as he is anxious to read correctly, earnestly attentive to sounds, it is ten to one but he goes wrong. But, as soon as he is wholly occupied with *ideas*, he is almost equally sure to go right. To make my meaning plain, I annex a few examples :

In *tarantula* and *Amanda*, the *a* in the first and last syllables is wrongly pronounced as in *late*. They should be sounded as in *liar*. In *epitome*, *eleven*, *return*, *December*, *peculiar*, the *e* in the first syllable is pronounced as in *be*. Should be as in *fuel*, *alter*. The *i* in *miraculous* and *divan*, is pronounced as in *fire*. Should be as in *logic*, *elixir*. The *o* in *commotion*, *content*, *domain*, *domestic*, is pronounced as in *dog*. Should be as in *actor*, *felon*.

By consulting a dictionary it will be found that the errors arising from this source amount to many thousands, all of which may be avoided by attention to the principle I have pointed out. Reading aloud the words from a dictionary would form an excellent exercise for a class, if the teacher would give sufficient attention to the recitation to detect and point out the defective pronunciation. But such an exercise in the

hands of one of our dreaming teachers would be worse than useless.

But what can be the cause of this singular error, which causes so much bad reading; keeping us right when least attentive, and leading us wrong when most anxious to be correct? Two reasons have occurred to my mind. If wrong, I should be glad to have them rectified.

The first is, that teachers of enunciation have not sufficiently qualified their directions to "pronounce every syllable distinctly." This, though in one sense true, is very liable to be mistaken. For the syllable on either side of the accented one ought to be passed over "with more rapidity and with a less distinct utterance," to use the words of Webster.

The other cause that seems to me to lead to a violation of the principle is, the manner of pronouncing syllables in the spelling classes. For instance, in spelling such words as *attend*, *concede*, *revert*, *promote*, the first syllable of each is recited as follows : a-t at, c-o-n con, r-e re, p-r-o pro; giving to the first two the *short*, and to the last two the *long* sounds of the vowels, whereas all of them ought to have the *obscure sound*.

If these be the true causes, the remedies are sufficiently simple and obvious. First, pupils that fall into the error should be reminded, that in speaking (and reading is nothing more than speaking from a book) words and syllables are pronounced with very different degrees both of rapidity and distinctness; that accented syllables and emphatic words should be sounded long and strong, all others "with more rapidity and with a less distinct utterance." Secondly, in spelling, the pronunciation of the separate syllables should be altogether dispensed with; or, if they must be pronounced, (though I confess I see no sufficient reason for the practice), it should be done *correctly*, i.e. *re* in *reform* should no longer be pronounced as *re* in *regent*; *in* in *inform*, no longer like *in* in *infant*; *con* in *convene*, no longer like *con* in *convent*, &c.

I have looked in vain in Worcester's Comprehensive Dictionary for exceptions to the principle above laid down. The only word that I have found that appears to differ is *amen*. But this is not properly an English word. In his large new work, however, the Universal and Critical Dictionary, I find he has given several dissyllabic words ending in *o*, such as *negro*, *bubo*, *echo*, *sago*, with both vowels long. I presume the latter to be in accordance with the pronunciation of the best speakers.

I shall resume this subject in your next number.
Pittsford, Sept. 30, 1847. P.

For the School Journal.

Importance of a Thorough Understanding OF THE MEANING OF WORDS IN ELEMENTARY INSTRUCTION.

The study of language is the most important that can be pursued, as it is the key to every other. If correctly taught, it unlocks the gates of the Temple of Science, and permits the youthful learner to enter within its portals, to contemplate its treasures, and feast his mind on the exhaustless store of entertainments there provided. While this has been acknowledged, and the attention of the scholar sedulously directed to elementary sounds and their combinations, that he might acquire a good enunciation, and to the study of Grammar to become acquainted with the construction of our language, its idioms and philologic rules, a thorough understanding of the meaning of words has been nearly overlooked.

In very few, comparatively, of our Common Schools has this most important branch of elementary instruction been introduced. The pupil has been left to commit the spelling columns of his book, till they become as familiar to him as the letters of the alphabet, and yet very few of the words convey to his mind any distinct idea—they are mere combinations of sound destitute of meaning. Spelling thus becomes a mere mechanical exercise, and sounds are vociferated with parrot-like fluency.

The fact that words form the medium through which thought becomes tangible, and knowledge is rendered available, should furnish a powerful stimulant to a diligent study of their use and meaning. If the words used by a speaker or writer are only imperfectly understood, they may as well not be listened to or perused; or, at least, they fall far short of conveying that instruction which would be otherwise furnished. Our scholars, as soon as they are able to spell out words of a few letters, are introduced to reading lessons, and these form a daily exercise, during nearly the whole course of their instruction in the public schools. The inquiry is naturally suggested, do they understand what they read? Are the subjects suited to their capacity, instructive, and familiarly illustrated? Are they questioned in regard to their import, and the more difficult words that occur fully explained? As far as my own observation has extended, it is far otherwise. The pupils would be ill prepared to give the collective idea of a sentence, or the particular meaning of each word. There are honorable exceptions. There are teachers who make it a prominent point to teach the meaning of words. In the mass of our schools, however, the orthography of words has been taught, to the exclusive neglect of their definitions.

This deficiency is regarded as a radical defect in our system of education. Every branch of science, every department of knowledge, is shrouded in comparative mystery, which familiarity with definitions would easily remove. For even technical terms often occur in the pupils course of reading which open a channel for useful hints and valuable suggestions.—Even the accomplished scholar, through every stage of his progress, is constrained to acknowledge this a

fundamental error in his early education. When the scholar comes to make a practical application of his knowledge—when the precise import of the phraseology he uses may affect his character, or, at least, the clearness or obscurity of the idea he essays to express, he is compelled to consult his dictionary in regard to many common words. It was once the complaint of one of our ablest authors that, although he had a clear idea of what he wished to say, he could not say it. Language adequate to his theme was not at his command. The teacher of the common and higher school has experienced no little difficulty in teaching the rudiments of composition, from the incapacity of his pupils to express with ease their ideas of the most familiar subjects, the result of deficient early training.

When we consider how small a portion of our population are favored with a classical education, how few comparatively enjoy any advantages, beyond what are afforded by the district schools, any improvement which can be introduced into them rises in importance. The common schools are the People's Seminaries, designed to furnish an elementary education, which shall meet the wants of the people. It is the boast of New England, that a very small fraction of her inhabitants are unable to read and write. But why teach the mere art of reading, and leave the untutored child, in the mazes of comparative ignorance of the meaning of what he chances to peruse. We do not assert that no benefits accrue from this method, or even from the spelling exercises as they are generally conducted.—The cultivation of the memory alone is preferable to leaving every faculty of the mind, to the dominion of thorns and thistles.

Whatever proficiency a student who leaves our schools may have made in the sciences usually taught, he cannot "properly be said to have learned even the art of reading," if he cannot read understandingly any common English book, and comprehend the terms used in discourses upon moral, religious or literary subjects. We often hear the remark in regard to a public speaker, "he does not come down to my comprehension." Has the hearer a right to make this requisition? Should he not rather be required to come up to the speaker? Shall the writer or speaker be required to dilute his composition by the use of inefficient language—shall he weave the web as thin as gossamer, that the thought may be scanned through its flimsy drapery? The hearer is the greater loser when the speaker's language is unworthy of his subject.

More recently, this subject has enlisted the attention of many distinguished educationists. Mr. Webster says "teach the child the meaning of words as soon as he can comprehend them." Few will deny that he can comprehend them at a very early age, if the definitions are familiarly illustrated. The best methods of teaching this branch have become an object of experiment and research, with experienced and successful instructors, and elementary books prepared, which promise essential assistance. The analytical method is perhaps received with most favor. It is well known that the primitive words in our language

are comparatively few and simple, and most of them at an early day, familiar to the child. In addition to these, let him be taught the meaning of prefixes and suffixes and he is prepared to pursue his studies successfully. The formation of derivative words is very imperfectly understood. How few children can tell the meaning of many compound words, whose primitives compose our most familiar household phrases.

The meaning of words may be successfully taught in connection with reading exercises. The place they occupy in sentences, and the office they perform will contribute to render explanations more intelligible and fixed. The explanation of one word may suggest that of others of the same family, which may properly constitute a lesson in defining. Thus one becomes a nucleus around which many, having a common primitive, may cluster and all be more easily understood and retained by association, which comes in to aid the memory, and, as both are active in the child when duly exercised and disciplined,—a vast command of language may at length be acquired.

The pupil should be made to perceive the distinction between words nearly synonymous. This may be done by requiring him to contrast sentences containing such words, or correct those where they are erroneously used. For instance, Franklin *invented* the laws of electricity, and Fulton *discovered* the steam engine. A correction of such sentences or the formation of those in which the words are used correctly, would we think fix in the mind a clearer idea of the precision required in the use of words than any other exercise.

To the eye of the young child familiar objects should be presented, that at the same time that he learns the characters which represent sounds, and the sounds formed by the different combinations of them, he may also learn names which he can apply to things. As he advances and meets with words which are the names of no objects which have come under his notice, these, if names of animals, for instance, should be made a theme for entertaining instruction, with regard to the nature, habits, and characteristics of the animals. If he has become a student of Geography, he may in this connection be questioned upon the climate, face of the country, &c., where the animal is found. If names of figures, as parallelogram, pentagon, occur, they should be drawn on the black-board or cut out of pasteboard. Let tangible or visible objects be presented to aid the pupil's perception.—Words are but the signs of ideas, and, it is too obvious to require proof, that the sign and the thing signified should, as far as practicable, be associated in the word. The pupil will thus become interested—his dormant powers which might well be sluggish when occupied with a routine of mechanical exercises, which furnished no fond for thought, will be aroused and a new impulse given to his intellectual energies. He will be trained to *think*, at a period when the mind is most susceptible of impressions.

Appeals have been made to the reflective powers of the youthful mind, at a very early age, with a degree of success which clearly evinces the ease with which they acquire a great variety of ideas and exer-

cise their reasoning powers respecting them. By constantly imparting useful information during the whole course of elementary instruction, these powers of the opening mind may be early developed, and the germs of intellect ripened for usefulness. By uniformly exhibiting sensible objects and securing his attention to explanations and illustrations level to his range of thought, his acquisition of knowledge will nearly keep pace with his progress in the art of spelling and pronunciation. A neglect to do this has, in many instances, created a distaste for scholastic pursuits, driven him from the school room, destroyed his relish for books, and prevented his embracing subsequent opportunities for improvement. "To this cause," says an English writer, "perhaps more than any other is to be attributed the deplorable ignorance which still pervades the mass of our population, notwithstanding the formal process of instruction they undergo,—and the little relish they feel for devoting their leisure hours to the improvement of their minds, and those pursuits which are congenial to rational and immortal natures." The same remark is applicable to a large portion of our own population, though favored with superior educational privileges.

For the School Journal.

The Study of Grammar.

MESSRS. EDITORS:—The remarks of your correspondent respecting the best method of acquiring a knowledge of Grammar are worthy of attentive consideration—they also remind the writer of a case in point, which fell under his own observation many years since, and which may serve to illustrate more fully the correctness and practical bearing of the principle advanced,—“That there are none of the studies pursued in our common schools which require greater maturity of mind to pursue to advantage than this.”

An individual whose only literary facilities were such as the district schools of the day afforded, and whose claim to the character of a “genius” consisted merely in industrious habits and an inquiring mind, at the age of fifteen commenced the study of grammar under the tuition of a female teacher, and in the course of six weeks, without anything more than an ordinary degree of application, he was able to compete successfully with other scholars of the same age who had been pursuing the study for three years, and this stand he was able to maintain during the following winter in the first class in school. The rapid improvement in this instance is to be attributed chiefly, if not entirely, to the fact that a more mature judgment acted in concert with memory, in connection with patient investigation, rather than to any special gift of intellectual superiority, and while the minds of his competitors were perhaps disgusted with dry details, and the disheartening process of acquiring a knowledge of grammar as it were by rote, he came to the work with no such influences to contend with. The individual in question turned his attention to other pursuits, and of course never became distinguished as a literary man, and his case is cited simply as a proof that early attempts in this department of study are not always the most successful.

H. K.

Convention of State and County Superintendents.

A convention of State and County Superintendents met, according to adjournment made last year, at the State House in Montpelier, on Wednesday, Oct. 20, 1847.

In the temporary absence of the State Superintendent, Hon. D. M. Camp was appointed President, and Rev. R. Case Secretary of convention.

By request of the President, Rev. T. Hall led in prayer.

After some preliminary remarks in regard to the objects of the convention, a document was read by Hon. D. M. Camp, which contained a detailed plan of alterations and additions to the existing school law—laid on the table.

The following resolution was then moved by Mr. Hall:

Resolved, That Teachers Institutes are first on the catalogue of instrumentalities at our command, for securing a body of enlightened and efficient Teachers.

After a full and interesting discussion, in which the objects and advantages of Institutes were set forth, as well as the manner of conducting them, the Resolution was passed *unanimously*.

Voted that the subject of recommending Arithmetics for use in our schools, be referred to a select committee, to report to-morrow morning. The following gentlemen were appointed said committee:

Hon. Horace Eaton, State Superintendent; Mr. Howard, Superintendent of Orange county; and Rev. Mr. Case, Superintendent of Caledonia county.

Voted that a committee be appointed to consider the propriety of recommending for use in our schools, a system of physiology, natural history, and intellectual algebra.

Messrs. Hall of Essex, Robinson of Lamoille, and Parmelee of Chittenden counties, were appointed said committee.

Mr. Scott called up the proposed amendment to the school law, offered by Mr. Camp.

After some discussion, in which the desirableness of the proposed amendments was generally admitted, as it was felt that there was not time for the convention to bestow upon the bill that careful attention which its importance demanded, it was voted to refer the matter to the State Superintendent.

Voted that the present law ought so to be altered as to make the *actual attendance* of scholars, rather than the whole number in a district, the basis, in part, for the distribution of the public money.

Adjourned to meet to-morrow morning at nine o'clock.

OCTOBER 21, 9 A. M.

Convention met according to adjournment, and after the reading of the minutes, the following report of the committee on Arithmetics was read by the Chairman.

Resolved, That this convention, inasmuch as Adams' Arithmetic (Daniel Adams) is regarded by us as superior to the other treatises on Arithmetic now before the public, except the series of Professor Da-

vies, and inasmuch as Adams' is in very general use in our schools, would not at this time recommend any violent or hasty measures, by way of introducing any new book; but impressed with a firm and deep conviction, that Davies' Elementary and Common School Arithmetics, whether used as a means of securing a thorough mental training, or for practical purposes, in the highest and most liberal sense, are decidedly superior to any other with which we are acquainted, we would unhesitatingly and strongly recommend the introduction of these books, so fast as a change can conveniently be made.

After remarks by various individuals the above report was adopted by the convention.

The committee on natural history, &c. made their report, after which the following resolution was adopted:

Resolved, That so far as practicable, the students of common schools should be confined to those prescribed by the statute; but if deemed expedient to introduce any other studies, we would recommend Natural History and Physiology as most appropriate, and Ackerman's First Book of Natural History, and Cutter's Physiology, as text books.

The following resolution offered by Mr. Camp, was passed unanimously.

Resolved, That we deem it important that private examinations of teachers should be discontinued; and that when practicable, two or more towns should be grouped together, and the Superintendents of each of those towns should be present at the examinations.

The following was offered by Mr. Scott:

Resolved, That we regard the Common School Journal, published by Messrs. Bishop and Tracy, as an important instrumentality in carrying forward our educational reform, and therefore worthy of a liberal patronage; passed unanimously.

Voted that when this convention adjourn, it adjourn to meet at the State House, on the Tuesday following the second Thursday in Oct. next, at 10 o'clock, A. M.

Voted that the doings of this convention be published under the direction of the Secretary.

Convention adjourned.

RUFUS CASE, Secretary.

Papers friendly to the cause will please publish.

The convention was not as full as was *hoped*, yet through most of the session there was a goodly number present, of Superintendents and other gentlemen interested in the subject of education. All seemed to come with the best feelings enlisted in the cause, and impressed with a sense of the vital interests involved in it. All felt that a good work had been begun, but, a work which demanded *continual* and unremitting efforts to carry it forward.

R. C.

The Plaster Blackboard.

Perhaps no greater improvement has been made in any of the appendages of the school-room, than in that useful article the blackboard.

This improvement consists in the use of colored plaster instead of the painted board. It has many considerations to recommend it. The chalk is used upon it *without noise*. It is easily erased. There is

no reflection of light, thus obstructing the sight; and last, though not least, it is very much cheaper than boards.

In erecting a building, the black surface can be put on at a very trifling expense. It can be applied to any old surface with equal facility. Any common mason can apply it who knows how to use the "*hard finish*." We may do the cause of common schools an essential service by giving the following simple directions for

MAKING THE PLASTER BLACKBOARD.

First, wet a sufficient quantity of lamp-black with alcohol, to color the plaster to be used, and mix this coloring with the "*hard finish*," at the time of putting it on.

The lamp-black may be wet with sour beer instead of alcohol. If it be wet with water it will not mix uniformly with the plaster on account of the oily matter contained in it, and the surface will not dry uniformly black, but will have a spotted appearance.—*District School Journal*.

From Page's Theory and Practice of Teaching.

Making a Religious Impression.

It was in the afternoon of a gloomy day in the latter part of November, when the pupils, consisting of some fifty boys, belonging to a school in a pleasant sea-port town in New England, were told by their teacher, a few minutes before the usual hour, that they might lay aside their studies and prepare for dismissal. During the early part of the day, there had been one of those violent south-east rain storms, so common upon the sea-coast at that season of the year. It is well known to the observing mariner, that a storm from the south-east never continues beyond twelve or fifteen hours; and when the violence of the storm abates, it is a common remark of the sailor, that "the northwester is not long in *debt* to the southeaster." Previous to this change of wind, however, there is what is expressively called the "*hull* of the storm,"—a period when the rain ceases to fall, the wind dies away to a perfect calm, the barometer is suddenly depressed, the clouds hover almost upon the face of the earth, shutting out the light of the sun, and causing a cheerless damp to settle upon every thing terrestrial, and a dreary gloom to shroud the mind itself. When the wind changes, these clouds are not gradually dissolved and broken up, so that the eye can catch transient glimpses of the blue sky beyond, as after a snow storm in winter; but the dark drapery is suddenly lifted up, as if by an unseen hand, and the western sky, from the horizon upwards, is left more bright and more charming than ever, to refresh the eye and reanimate the soul.

It was such a day, as before remarked, when the pupils of this school—partly because of the darkness of the school-room, and partly because of their protracted confinement within a close apartment during a gloomy afternoon—were a little earlier than usual about to be dismissed. The pupils all seemed to welcome the happy release that awaited them,—and in their eagerness to escape from confinement, they very naturally neglected to observe their accustomed regard for quiet and order in laying aside their books.

It was, however, a fixed habit with the teacher, never to give the signal for leaving the room till all the pupils had taken the proper attitude for passing out with regularity, and then had composed themselves to perfect silence. On this occasion perhaps two minutes passed away while the boys were gradually, almost impatiently, bringing themselves to a compliance with this rule of the teacher.

During this interval of waiting, the cloud, unperceived by the teacher, had been slowly raised up from the western horizon, just in time to allow the setting sun to bestow a farewell glance upon the sorrowing world at his leave-taking. Through the Venetian blinds that guarded the windows toward the west, the celestial light gleamed athwart the apartment, and painted the opposite wall in front of the pupils, with streaks of burnished gold! In an instant every countenance was changed. A smile now joyously played, where, before, sadness and discontent had held their moody reign. The teacher was reminded, by all these circumstances, of the beautiful language of the prophet, which promised the gift of "*the garment of praise for the spirit of heaviness*." What could be more appropriate on this occasion than a song of praise!—Without speaking a single word, the teacher commenced one of the little songs already familiar to the whole school:—

Lo the heavens are breaking,

Pure and bright above;

Life and light awaking,

Murmur—*God is love*—

God is LOVE.

Round yon pine-cloud mountain,

Flows a golden flood;

Hear the sparkling fountain,

Whisper—*God is good*—

God is GOOD.

Wake, my heart, and springing,

Spread thy wings above,—

Soaring still and singing,

God is ever good—

God is GOOD.

Instantly every voice that had ever sung, now uttered heart-felt praise. The attendant circumstances taken at the happy moment, furnished such an impressive commentary upon the import of the words, that they were felt, as they never before had been felt, to be the words of precious truth. Every heart throbbed in unison with the sentiment. At the close of the song, there was profound silence in the room. After a moment's pause, during which the truth that *God is good* seemed to pervade each mind and hold it in silent reverence,—the signal for departure was given. One after another the boys pressed from their seats with a light and careful step, as if noise and haste would be a desecration both of the time and place,—and when they reached the open air, refreshing and exhilarating as it was, there was no boisterous shout, no rude mirth; each took his homeward course, apparently with a new and lively conviction that God is good.

At the late session of the Windham County Court, Rev. Addison Brown was re-appointed Superintendent of Common Schools.

For the School Journal.

Shall we have a good School the coming Winter?

An important question this, surely; one to which no one can be indifferent, who understands in any measure how much is depending upon it. The parent who has the good of his child at heart will certainly feel a lively interest in it. And so must every one who cares to see "internal improvements" promoted—*internal* I mean in the strictest sense, improvement of the *mind* and *heart*. Every one will feel interested in it who cares to see around him a virtuous, intelligent, well regulated, and thriving community.

Who has not had occasion to notice the difference, the wide difference between a good school and a bad one? And not merely that difference which strikes even a superficial observer so palpably on entering a school room, but that which is seen in *results*, which can be plainly traced long after the schools have closed and the teachers left. Could the connection between cause and effect be always seen, how many of the miserable habits in community would be traced to the school room for their origin! Habits pertaining to mind, as well as manners and morals. How much of that *mistiness* in which some minds are always enveloped, which have all the elements of clearness and vigor; how much vague and superficial thinking, misconception of truth and wrong application of principles which occasion so much mischief.

But we have not time, nor is it our object now to speak of the many evils which result from the bad teaching or bad management of a school; no one need go far to see those in actual existence. But having hinted at the *immeasurable advantage* of a good school over a bad or indifferent one, we return to the inquiry with which we started: Shall we have a good school the coming winter! Most certainly, if we can secure one, every parent and committee man, and child too, is ready to reply. But this is one of those good things which does not come to us in the natural course of events, and without the use of any means adapted to secure it. Allow me to suggest a few things which should be done by those who would secure an object so *very desirable* as a good school.

1. In the first place look to the *school house*. See that it is made tight and warm. Have it "hanked up" if, like too many old houses, it need it. See that the doors are repaired, hung on hinges and furnished with latches. Let the broken glass be replaced, and the shutters made fast. See that the *stove* is in order, furnished with shovel and tongs, and a supply of dry wood in the wood house. Let the rickety desks be made firm to avoid noise; and "last, not least," let the house be made *neat and clean*, and so give a hint to the teacher and scholars to keep it so, and don't forget the pail, and cup, and broom. Let the committee do all this, and charge it to the district, and the district will not grudge to pay him.

2. Having done this, look out for a *GOOD TEACHER*. And first of all, ask the applicant to *show his certificate*. Look at it *yourself*, and see whether it is *full*;

or whether, on account of his incompetency to teach some branch named in the statute, that branch is omitted in his certificate. Do not employ one who has not been examined,—and for several reasons. 1. The fact that he has not, is presumptive evidence against him. 2. Because, although you may be satisfied that the individual in question is competent, it will be encouraging a class who will apply for schools while they are *entirely incompetent*. And 3. It is disparaging a good provision of law.

To aid you in determining the qualifications of applicants, individuals are appointed by law, to examine and license. It is made their duty, first of all, to require "evidence of good moral character;" and then personally and carefully to examine into their attainments, and so far as can be done, into their ability to *teach* and manage a school. And that they may not relax, when the ordeal has once been passed, forget what they once knew, or fail to advance with the advancing requirements of our schools, this examination must be repeated *every year*. And good teachers, those who are conscious they are qualified, have no *objection*, nay they *wish*, to be examined. Do not then, incur the greater risk of getting a poor teacher, and encourage lawlessness, by employing one who has not submitted to an examination.

In the next place, make it an object to secure one who has had *experience*. In nothing is it more true that we *learn by experience*, than in teaching. Say not, as is sometimes said, "he will try harder in his first school;"—why not say the physician will try harder to save his first patient, and so in sickness choose the one who has had no experience! The teacher can certainly, and certainly ought, improve by his past experience; he can avoid past errors, understand better the material on which he is to operate, gain a facility in communicating and illustrating, and a tact in managing, which can be acquired only by actual experience; and he who does not "try his best" whether in his *first*, second or *twentieth* school, should take a discharge and retire.

And in the next place, do not lose the opportunity to secure a good teacher, simply because he demands one dollar, or *five dollars* more wages. The actual worth of a good teacher, over and above that of a poor one, cannot be told in dollars. Do not mind a little extra trouble or expense: *get a good one*, and you will find your reward 'after many days,' if not sooner. If you cannot raise money enough in your district to employ a *first rate* male teacher, you can surely to employ a *first rate* female teacher. Then do it. There are *many* such to be had; many whose schools would compare favorably, in every desirable quality, with the best in the land. Instead then, of hiring a cheap, inexperienced master, hire an experienced, and approved mistress.

I may perhaps suggest some things in another article, important to be done, after securing a teacher, in order to have a good school. R. C.

THE BULK OF THE EARTH. The earth, speaking roundly is 3000 miles in diameter, the atmosphere is calculated to be 30 miles in altitude; the loftiest mountain peak is estimated at 5 miles above the level

of the sea, for this height has never been visited by man, the deepest mine that he has formed is 1650 feet; and his own stature does not average 6 feet. Therefore, if it were possible for him to construct a globe 808 feet—or twice the height of St. Paul's cathedral—in diameter, and to place upon any one point of its surface an atom of 1-4380th of an inch in diameter, and 1-730th part of an inch in height, it would correctly denote the proportion that man bears to the earth upon which he moves.

Employment of Female Teachers.

Extracts from the Eighth Annual Report of Hon. Horace Mann, for the year 1845.

One of the most extraordinary changes which have taken place in our schools, during the last seven years, consists in the great proportionate increase in the number of female teachers employed.

In 1837, the number of male teachers in all our public schools, was	2370
Of females,	3591
In the school year 1843—4, it was, males,	2529
Females,	4581
Increase in the number of male teachers,	150
do " female "	990

During the same time, the number of schools in the State, has increased only 418

This change in public sentiment, in regard to the employment of female teachers, I believe to be in accordance with the dictates of the soundest philosophy. Is not woman destined to conduct the rising generation, of both sexes, at least through all the primary stages of education? Has not the Author of nature pre-adapted her, by constitution, and faculty, and temperament, for this noble work? What station of beneficent labor can she aspire to, more honorable, or more congenial to every pure and generous impulse? In the great system of society, what other part can she act, so intimately connected with the refinement and purification of the race? How otherwise can she so well vindicate her right to an exalted station in the scale of being; and cause that shameful sentence of degradation by which she has so long been dishonored, to be repealed? Four-fifths of all the women who have ever lived, have been the slaves of man,—the menials in his household, the drudges in his field, the instruments of his pleasure; or at best, the gilded toys of his leisure days in court or palace. She has been outlawed from honorable service, and almost incapacitated, by her servile condition, for the highest aspirations after usefulness and renown. But a noble revenge awaits her. By a manifestation of the superiority of moral power, she can triumph over that physical power which has hitherto subjected her to bondage. She can bless those by whom she has been wronged. By refining the tastes and sentiments of man, she can change the objects of his ambition; and with changed objects of ambition, the fields of honorable exertion can be divided between the sexes. By inspiring nobler desires for nobler objects, she can break down the ascendancy of those selfish motives that have sought their gratification in her submission and inferiority. All this she can do more rapidly and

more effectually than it can ever be done in any other way, unless through miracles, by training the young to juster notions of honor and duty, and to a higher appreciation of the true dignity and destiny of the race.

The more extensive employment of females for educating the young, will be the addition of a new and mighty power to the forces of civilization, it is a power, also, which, heretofore, to a very great extent, has been unappropriated; which has been allowed, in the administration of the affairs of men, to run to waste. Hence it will be an addition to one of the grandest spheres of human usefulness, without any subtraction from other departments;—a gain without a loss. For all females,—the great majority,—who are destined, in the course of Providence, to sustain maternal relations, no occupation or apprenticeship can be so serviceable; but, in this connection, it is not unworthy of notice, that, according to the census of Massachusetts, there are almost eight thousand more females than males belonging to the State.

But if a female is to assume the performance of a teacher's duties, she must be endowed with high qualifications. If devoid of mental superiority, then she inevitably falls back into that barbarian relation, where physical strength measures itself against physical strength. In that contest she can never hope to succeed; or, if she succeeds, it will be only as an Amazon, and not as a personification of moral power.—Opportunities, therefore, should be every where opened for the fit qualification of female teachers; and all females possessing in an eminent degree, the appropriate natural endowments, should be encouraged to qualify themselves for this sacred work. Those who have worthily improved such opportunities, should be rewarded with social distinction and generous emoluments. Society cannot do less than this, on its own account, for those who are improving its condition; though for the actors themselves, in this beneficent work, the highest rewards must forever remain where God and nature have irrevocably placed them,—in the consciousness of well-doing.

Doing Good to Others.

"Power to do good," says Lord Bacon, "is the true and lawful end of aspiring. Merit and good works is the end of man's motion; and conscience of the same is the accomplishment of man's rest; for if man can be a partaker of God's actions, he will be a partaker of God's rest." Again he says:—

"Wisdom for man's self is in many branches thereof a depraved thing. It is the wisdom of rats, that will be sure to leave a house somewhat before it fall. It is the wisdom of the fox, that thrust out the badger who digged and made room for him. It is the wisdom of crocodiles, who shed tears when they would devour. But that which is specially to be noted is, that those which, as Cicero says of Pompey, are *amicantes sine rivali*, are many times unfortunate. And whereas they have all their time sacrificed to themselves, they are in the end themselves sacrificed to the inconsistency of fortune, whose wings they thought by their self wisdom to have pinioned."—Lord Bacon, *by Montague*, 1st vol. p. 278.

Treatment of Children.

Those who are dull or behind others, either from having been neglected at home, or from any other cause, should be especially encouraged by the teacher.

A young lady of my acquaintance who has charge of one of the departments in a boy's school, in a neighboring city, states that a lady came to her school one morning with her son, about twelve years of age, who "had been suspended from every other school in that section of the city, for truancy and other bad conduct." The mother said to her, "he is a very bad boy. His father and I have whipped him and whipped him, but it does no good. You will be obliged to punish him, he is so very bad." The young lady, immediately after the mother left the school room, said to the boy, in a very kind affectionate manner, (she was a cheerful and pleasant young lady,) "Charles, I wish you to go to Mr. —'s, in — street, and take a letter for me; and as it is a matter of some importance to me, I wish you to go and return as soon as you can without injury to yourself, and bring me an answer." "The boy then," said the young lady, "raised his head (which up to that time, had been dropped down) and smiled. He took the letter, and judging from the time he was absent, and from his appearance when he returned, he must have run all the way there and back. I complimented him," said the young lady, "for the promptness, expressed fears that he had injured himself in consequence of running so fast, and thanked him for his kindness in going for me; with all of which he seemed highly pleased. I then gave him a seat in a class; and, occasionally, for several days, requested him to do errands for me: and," she concluded by saying, that "I never had a better boy in school than Charles was, during the eighteen months which he attended my school." This boy had, most probably, never received any encouragement to do well before.

—Cobb on Punishment.

Newspapers in Teaching Geography.

On page 115 of Fowle's *Teachers' Institute*, in speaking of his *Geography for Schools*, he says:

"As far as my knowledge extends, this was the first book that recommended the reading of Newspapers to the upper classes in Geography. Every teacher knows that much of the geography taught in our schools is not such as is of every day use in society and common life; and perhaps nothing so completely shows what should be taught for geography as these very newspapers. All that is doing in the world is there recorded long before it gets into books. The mere record of arrivals and clearances is an excellent lesson. The reading of the news shows in what the books are deficient; and if, while the teacher is reading to the class, they, atlas in hand, find the places mentioned, or, slate in hand, record them to be found against the next lesson, a fund of geographical knowledge will be acquired, that may be sought for in vain among the pages of the text books."

In the *Geography* itself, the author, among other remarks, says: "It was my custom, when a teacher, to take such pupils as were acquainted with the text

book, and read them the ship news, advertisements, and such paragraphs as related to the manners, customs, improvements, disasters, wars and other incidents in every part of the world.

Few newspapers are so barren as not to furnish enough matter of this sort for a profitable lesson, and the author always found this kind of lesson one of the most interesting to children, affording him an opportunity to make them acquainted with the actual state of the world, and enabling him to impress the names and situation of places upon their minds by connecting them with useful and agreeable information."

Let Children Sing.

"All children can learn to sing if they begin in season. I do not say all will have the same sweet voice of the nightingale; for some have naturally sweet, mild and soft voices when they talk, while others speak in loud, strong and masculine tones. The same is true in regard to singing.

"In Germany every child is taught to use its voice while young. In their schools all join in singing as a regular exercise, as much as they attend to the study of geography; and in their churches the singing is not confined to a choir, who sit apart from the others, perhaps in one corner of the house, but there is a vast tide of incense going forth to God from every heart which can give utterance to this language from the soul.

"Children, sing! yes, sing with your whole hearts! David sung before the Lord, and it is meet that you should do the same; and always, when angry feelings rise in your breasts, curb and check them by singing sweet and cheerful songs."

THE OPINION OF A TEACHER OF FORMER TIMES.—

"The first and chiefest point is, that the diligent master make not the scholar haste too much; but that in continuance and diligence of teaching he make him rehearse so that while he hath not perfectly that which is behind, he suffereth him not to proceed; for this posting haste, overthroweth a great sort of wits, and casteth them into amazement, when they know not how they shall go forward or backward, but stick fast as one plunged, that cannot tell what to do or which way to turn, and then the master thinketh the scholar to be a dullard, and the scholar thinketh the study too hard for his wit, and the one hath an evil opinion of the other, when the fault is in neither, but in the manner of teaching."

ARITHMETICAL QUESTION. A gentleman, deceased, directed by his will that his eldest child have £100 and one eighth of what remained of his property; the second, £200 and one-eighth of what then remained; and so on to the end, each having a legacy of £100 more than the preceding one. Now, on dividing the property, it was found that each received the same. How many children did the gentleman leave? What was his fortune, and how much did each receive?

Suppose a man owes \$1000, what sum shall he pay daily, so as to cancel the debt, principal and interest, at the end of a year, reckoning it at six per cent. simple interest?

THE AGRICULTURIST.

The Agricultural Fairs.

We have before us accounts of the annual exhibitions of the Windham, Windsor, Orange, Caledonia, Washington, Franklin, Chittenden, Addison, and Rutland County Agricultural Societies, with the lists of Premiums awarded, &c. It is of course impossible to crowd into our sheet the details of them all. We therefore confine ourselves to a few general notices.

Addresses were delivered at Brattleboro by Hon. W. B. Ranney; at Woodstock by Hon. Jacob Collamer; at Montpelier by R. Richardson, Esq., (Prize Address); at Rutland by Hon. George P. Marsh; at Burlington by J. W. May, Esq.; at Vergennes by Professor Meacham.

The attendance was every where large, the estimates being from 2000 to 4000; which shows a very lively and increasing interest in these occasions, and is sufficient proof of the popularity of the *small* State appropriation which has been the means of calling so many of these societies into existence. And we may add that these gatherings of our population were not the least interesting objects that invited the stranger's notice. It is worth the while to look upon a large promiscuous assembly of the men and women of Vermont, and to notice the vigor and intelligence that are applied to the culture of our fields and the management of our households. Good order, freedom from noise and disturbance of any kind, from intemperance, wrangling, and profane language, were circumstances observable everywhere, and were fitted to cheer the heart of every true Vermonter. At St. Johnsbury some one seems to have been encouraged by the late license vote of the County to attempt the revival of obsolete fashions; but the case was disposed of, according to the Secretary's report, as follows:—

"One [of the swinish family] of a dubious character, rather striped, was exhibited for a short time in a shed (or *grave sty*) near by, but the proximity to the monuments of the dead, probably produced so strong a sense of the tendency of the exhibition, that the owner adjourned into a neighboring field, where he was soon greeted by certain honorable personages, deputed by the State of Vermont to take special charge of those who are not able to keep out of mischief."

The Premiums for Field Crops are awarded later in the season, and we generally have with them valuable information in regard to modes of culture, &c. They will furnish important matter at another time. The lists before us of articles exhibited include working oxen, beeves, milk cows, steers, heifers, bulls, calves; stud horses, geldings, mares, colts; bucks, ewes, lambs, (saxony, merino, grade, long-wooled,) wool in the fleece; swine; poultry; butter, cheese; potatoes, onions, beets, carrots, parsnips, tomatoes, pumpkins, squashes, cabbages, melons; flowers; apples, pears, peaches, plums, grapes; sugar, honey; plows, harrows, cultivators, scythes, horse-rakes, cheese presses, churns, &c. &c.; leather, boots, shoes, tailors' work, cabinet work, printing, &c.; broad cloths, cassimeres, buckskins, flannels, silk in various

forms, carpets, rugs, linen, tow cloth; marble; and innumerable kinds of household manufactures, for ornament or substantial use; also, orchards and nurseries. The object has been to call forth a fair exhibition of the fruits of Vermont industry in its various departments. The people have this year responded to the call to a far greater extent than ever before; and with this additional experience, arrangements will doubtless be made for next year, which will result in a still more complete and gratifying display.

In regard to the leading interests of the State, the evidences of progress were very decided. Our flocks and herds are undoubtedly improving, and a new spirit of enterprise is beginning to manifest its fruits.

The following extracts will give the reader some notion of the spirit of these interesting occasions:—

CHITTENDEN COUNTY.

The 22d and 23d of September were days long to be remembered by the farmers and friends of Agriculture and Domestic Industry of the County of Chittenden and their numerous visitors from adjoining Counties and sister State. The skies would not have been more auspicious, the roads were in fine order, and nothing to induce any to "stay away." At an early hour on the 22d, every road leading to Burlington was filled with all sorts of four-footed animals, the products of farms, shops, and dwellings, Ladies and Gentlemen, (not patent ones, manufactured by French dancing masters,) Lads and Lassies, all going to the "CATTLE SHOW." The best feeling prevailed, and nothing transpired during the two days to interrupt it, unless it might have been some spirit of rivalry known only to the parties concerned.

The Society were greatly indebted to their Committees of Arrangements for the fine order and arrangement which allowed all to be seen to the best advantage. Vermont stands high as an agricultural State, and all strangers present acknowledged she well deserved her reputation. One English gentleman remarked, after visiting the show-grounds and taking a survey of the Town Hall, that the show of the ruddy, happy faces of our Green Mountain Girls alone was worth more than a guinea. The show of animals, farm implements, &c., was on the beautiful grounds situated on the shore of the Lake, known as the "Camp Ground," which a few years since was purchased by the town of Burlington for public purposes. The exhibition of Fruit, Domestic Manufactures, Butter, Cheese, &c. &c., was in the large Town Hall.

The show of Cattle was very extensive. As the books of entry have not all been returned to the Secretary, he is not able to state the precise number; but they were entered by numbers, some of them numbered nearly 400. The row of Horses was near half a mile in length, while one side of the grounds was occupied by pens for sheep, &c., and the centre for farm implements, &c. &c.

On Horses the Society offered no premiums except for studs, mares, and colts three years old and under. Of these classes the show excelled any previous one, and bore ample testimony to the new spirit of enter-

prize which pervades this department of agricultural improvement.

Of Cattle—particularly native—we have never seen the show equalled. Some of them, for good size, fair proportions, and perfect symmetry of form, cannot be excelled by any foreign importations.

A very respectable number of thorough bred cattle were on the ground, and their appearance indicated either great attention on the part of their owners, or the superiority of the pastures of Vermont. We saw no better Durhams, Devons, Herefords or Ayrshires at Saratoga, as to size or form, while the cattle bred in Vermont showed a decided superiority in their fine glossy coats and compact forms.

The exhibition of Working Oxen and Steers was good,—and specimens of their training were witnessed that alone were worth the trouble of a two-day's journey. Besides the usual economical movements of turning, backing, the quick step, &c. they were made to perform, by mere motions and a low tone of voice, some of the fancy evolutions of the military parade ground, to the great astonishment of those who regard the ox as a dull, stupid beast, naturally fit only for the drudgery of excessive loads, with blows and yells, enough to break down the spirit, and destroy the activity of any animal, and which doubtless make the poor ox the slow mope he too often is.

The number of Sheep was not great when compared with Cattle, but in quality they excelled any before exhibited. Pure blood Merinos and Saxons were exhibited fully equalling any which can be shown in any adjoining Counties or States.

Of Flowers little can be said. While a few ladies fitted up some fine floral ornaments, bouquets, &c., those possessing green houses and flower gardens, in the County, seemed to have forgotten "the Fair."

Of fruits the show was magnificent. Many were present who had lately seen the splendid collection of fruits at Saratoga, and we heard but one opinion expressed of the comparative merits of the two exhibitions, which was that the show of Apples, Pears, Plums, and even grapes and Peaches at Burlington excelled that at Saratoga—showing conclusively that at least in all the more valuable fruits the Valley of Lake Champlain can compete successfully with any part of the world.

CALEDONIA COUNTY.

"The Fair on the whole was one of the most gratifying that has ever been held in this County. It was estimated that between 3000 and 4000 people, the *bone* and the *sinew* of the County were in attendance, and notwithstanding the very large collection, the most perfect order everywhere prevailed, through the day, and at 8 o'clock in the evening, there were probably not half a dozen strangers remaining in the village.

The exhibition of neat stock, especially of oxen, was beyond all precedent. It had generally been supposed that in consequence of the high prices which had been paid for beef, there was scarcely sufficient remaining in the County, to make a decent exhibition; but if the large number which were exhibited, and the perfect symmetry of their shape, their good order and perfect training, were only a specimen, remnants

which the drovers have not taken off, the farmers of Caledonia County may well be proud of their productions.

The exhibition of Cows, although there were some good specimens, was, on the whole, small for this County, which is celebrated for its dairy. A full exhibition of the prime cows in the county would add much to the interest and profit of the Fairs, by showing what is and can be done to improve our breeds."

"Of Horses, it is believed, that there was a better exhibition than heretofore, and it is gratifying to notice the increased attention to this branch of husbandry. Vermont has gained an enviable reputation, heretofore, for the best stock in the Union and at the late New York State Fair the "Gifford Morgan" was exhibited (now 21 years old) and the owner was offered \$9000 for him. The Green Mountain Morgan and other Vermont horses also attracted much attention."

Secretary's Report.

WINDSOR COUNTY.

"Besides the beautiful horses, cattle, sheep, swine, &c., there were in attendance a great crowd of spectators both ladies and gentlemen, from all parts of the county and we are more than ever convinced that the fair should be continued two or three days. The exhibition was so hurried and so much business crowded into so little space of time, there could not, possibly, be that deliberation in examining and awarding premiums, which the subject requires, and the rooms occupied for the exhibition of domestic and fancy manufactures, were so perfectly jammed full, no one could examine any thing critically, with any comfort."

Mercury.

In several counties the exhibition is continued for two days. It should be added that the exhibition at Woodstock was an exceedingly gratifying one so far as the articles exhibited were concerned,—showing an immense advance on that of last year in almost every particular.

FRANKLIN COUNTY.

"The show of cattle was large, altogether superior in quality to any former exhibition, and such as does honor to the county and State.

"Numerous articles of Domestic Manufactures were exhibited, many of them excellent of their kind, some of them superior, showing that the use of the spinning-wheel and loom are not entirely forgotten.

"The Fair, on the whole, in the number and quality of the animals and articles exhibited, was decidedly superior to former years, showing a progress in improvement in Agriculture of the county and that Farmers are becoming awake to their true interest.

"It is to be regretted that the limited time allowed the Committees, did not permit them to make more detailed reports."—*Republican.*

RUTLAND COUNTY.

"The second annual Fair of the Rutland County Agricultural Society holden on Wednesday and Thursday of last week, was such an one as could not fail to gratify all in attendance, and inspire a just feeling of interest and pride, in our truly noble and prosperous county. We have seldom if ever seen a larger collec-

tion of the citizens of the county together than was assembled on this occasion; and the showing made by the farmers, mechanics, artisans, and last, though not least, the ingenuity and handiwork displayed by the ladies of the county, was far more imposing than the most sanguine could have expected, and was such certainly as no county in Vermont or in New England need be ashamed of.

"In another column will be found the awards of the various committees, and of course in these reports will be found enumerated all the articles, which, according to the regulations of the Fair, were entitled to premiums. But meagre indeed would be the idea formed of the richness and beauty displayed on this occasion, by the simple perusal of this report. Many articles were exhibited which under the rule of the society were not entitled to premiums; but there was nothing presented that was not well *worthy of one*."

"Oxen were *oxen* on this day of days; and it may be said of all the different varieties of animals in the exhibition, they were what they purported to be; and all seemed to vie with each other to do honor to themselves and their owners; even the *swine* tribe put on no borrowed airs, but each appeared ambitious to show himself the *greatest hog*, and seemed satisfied in granting his own praise, and his defiance of all rivalry.

"The showing of butter, cheese, maple sugar and we may say of every variety of farm produce as well as of mechanical and household work, was much larger and better than last year, and, indeed, we may in conclusion say, that there was not from the most noble animal to the smallest specimen of mechanical skill, or the least useful article of fancy work—a single thing placed in this exhibition that did not speak the praise of old Vermont, and do honor to the enterprise, intelligence and spirit of our people."—*Herald*.

ADDISON COUNTY.

"The weather was peculiarly auspicious, and nothing occurred, to our knowledge, either in the habits or orderly deportment of the highly respectable body of people assembled, which marred in the least the feelings and wishes of the most moral and patriotic attendance, upon this occasion."

"As our State is destined ever to subsist chiefly by grazing, the fine display of stock was highly gratifying to those interested in the prosperity of the country. The show-ground presented a long line of cattle, and another of horses. If not so numerous as some have asserted, as exhibited upon former occasions, we find it the opinion of better judges than ourselves that the cattle, especially the native breed, for fair proportions, size and symmetry of form, were hardly surpassed at any previous show. The stock of foreign origin, appears to us to have been more than usually extensive, and was highly creditable to the taste and enterprise of those engaged in rearing it. In number and size, there is an advance which will, by a judicious mixture with the native, add vastly to the richness of the county.

"The exhibition of Sheep, in every respect, showed a decided improvement in this branch of rural husbandry. For the year past, several events have occurred, among which may be enumerated the buoyant

state of the wool market, and the establishment of a depot to induce farmers to improve the quality and condition of their great staple. Seldom have they displayed more energy and enterprise in this respect.—'They have now a more perfect knowledge of the wants and wishes of the manufacturers, and have endeavored to meet them by cultivating a finer quality of the article, and bringing it to market freed from all foreign substances. Pure blooded Saxony and Merino are now justly and highly appreciated. Among the bucks on the ground, it might be invidious for us to particularize.'" "Of the Merinos, there was a very numerous collection; and we will venture to say, in fineness and weight, unrivalled in the State, as no people have been more enterprising than those of Addison County in improving the breeds.

"The show of Horses was quite extensive. The younger stock proved clearly that our farmers have not been inattentive to the improvement in this highly valuable animal. The generation now coming forward, can boast the highest blood in this section of country. Many of our yearlings and two-years-old are the offspring of the famous *Black-Hawk*, who, at the late New York State Fair, after a full trial, was pronounced the most elegant and soundest bottomed horse ever seen at the celebration of the Society."

Galaxy.

For the Vermont Agriculturist.

English Agriculture.

EXTRACTS FROM COLMAN'S REPORTS.

"England presents at this time a more brilliant example than any age or country has before witnessed of the application, I will not say of science, for that would not comprehend the idea I wish to express, but the application of mind to agriculture. The practice of agriculture and the philosophy of agriculture are matters of universal interest. Men of all grades and conditions are laboring in this great cause, and are asking for the how and the why and the wherefore. The brightest intellects are directing their talents to agricultural inquiries; and the humblest in their humble, but not inefficient way, are seconding their efforts. So many minds concentrating their rays upon the same point, they must be sure to *illuminate it with an extraordinary brilliancy*.

"The condition of the laboring agricultural class is certainly in many parts of England, exceedingly depressed, and though in frequent instances it may be called comfortable, in few that I have seen can it be considered prosperous. They are very poorly fed; with many exceptions they are wretchedly lodged; their wages are inadequate to their comfortable support—and their situation affords little or no hope of improvement—at least, the power of making it better does not rest where it should, with themselves."

But notwithstanding their poverty, this class are making commendable improvements in agriculture in cases where they are allowed to rent small pieces of land, say from one-fourth to four or five acres.

"One of the witnesses before the Parliamentary committee gave an account of a man, who supported

himself and wife and son, from two acres of land, for which he paid a rent of about forty dollars; and in the course of seven years he had saved enough from the produce of these two acres to purchase two other acres of land for which he paid about £30 or £40 per acre.

"John Piper in Sussex, holds an allotment of four acres. He obtained in 1842, forty-two bushels of wheat from three-quarters of an acre of land; he had 250 bushels of potatoes from $\frac{1}{4}$ of an acre, he had 10 bushels of barley, and from his other land kept two cows and three or four pigs; he considers there might be an acre of grass, and the cows are kept entirely upon the produce of the four acres. He saves all his liquid manure in a tank by his own house, and mixes with it a portion of soot and soil; he throws his land into heaps, and puts the liquid upon the heaps, and then spreads it abroad,—"because," as he says, "his land is so near the chalk that if he puts his liquid manure upon his land three-fourths of it would be wasted—it would go clear away, so as never to get it again; but when put in a heap of mould, it is retained."

"One observation which occurred to me, was the extraordinary pains taken to save the manure. Nothing was wasted. The animals were stall-fed, and kept constantly in the stable, and a small brick or stone tank, well cemented with lime was sunk near the cow-stable and pig-stye, which received all the liquid manure; and the contents of these tanks, on their becoming full, were pumped into a small cart, with a sprinkling box attached to it, like that used for the watering of streets in cities, and distributed over the crops, always with the greatest advantage and with effects immediately perceptible."

"The facts above stated are remarkable, but what has been done can be done. They forbid one resting satisfied with what has been accomplished; and they encourage the hope that the productive powers of the soil are vastly greater than have yet been determined. Onward! is the watchword of the present day in every department of science and art. Why should agriculture form an exception! A way with the drones! Do not let us mistake a fog-bank for land, nor think that we have reached the end of the voyage until our feet actually press the solid ground."

The above facts and remarks are commended to the attention of such farmers in Vermont as consider themselves too poor to make improvements in agriculture.

"One great feature in the improved husbandry of England is apparent in its live stock. I do not speak of it as seen at the cattle shows of the different agricultural societies in the kingdom; for here the animals are all selected, or at a very great expense and after a long time fitted for the exhibition; but I speak rather of them as they are seen in Smithfield market every Monday, and at the other smaller markets and fairs in various parts of the country. Here are the cattle and sheep of several distinct breeds, and all of remarkable excellence of their kind; I do not say perfect, for that in almost all cases, is assuming too much,—but leaving very little to be desired beyond what has been attained. Their condition and form,

their symmetry, their fatness, are all admirable; and each breed is seen retaining its distinct properties, and what is most remarkable, showing how much can be done by human skill in improving the animal form and condition, and bringing it to a desired model."

Railroads are also rendered auxiliary to the advancement of agricultural interests in England, and will doubtless, in time, have the same effect in Vermont.

"A farmer in Ware told me that the driving of a fat beast to Smithfield, about 26 miles, occupied formerly two days. The animal now goes by railroad in two hours, at a cost, I think, of not more than 2s, and comes into the market fresh and sleek, like a new bonnet from a band-box. But there is another animal benefitted beside the quadruped; and that is the drover himself, who instead of spending 8 or 10 days or more on the road, at a great expense of money, and not a little increased hazard of morals every day he was away from home, his business is now accomplished, his money received, and himself returned to his home in three days.

"I asked an aged farmer in Berkshire Co., in England, whether he had seen any great improvements in agriculture, to which he replied, "Immense improvements; we knew nothing; every thing is now better done, the crops are far more various and more abundant; the product of wheat has almost doubled; the turnip cultivation has been created; the implements are far better; the live stock is beyond all comparison better; every thing, every thing is better."

The increased production of English agriculture has been exhibited in the diminished importations of breadstuffs. From 1801 to 1810 the population averaged 17 $\frac{1}{2}$ millions, and the annual import of wheat, if equally distributed would have afforded over a peck to each individual. From 1811 to 1820 the population averaged 20 millions, and the wheat imported annually would have allowed six quarts to each person. Taking the three years 1823—4 and 5, the importation would have allowed about a pint to each consumer,—the population having increased to 25 millions. In ordinary years this vast population is almost entirely supported on the productions of a territory not larger than New England, and doubtless the territory of New England when its agricultural resources are fully developed, will be capable of sustaining even a greater population than now throng the island of Great Britain.

AGRICOLA.

GYPNUM. Plaster of Paris fixes the ammonia of the atmosphere in the soil, and its influence is thus described by Liebig; and its good effects may be prolonged by the use of ashes, which will restore to the land the potash removed in a series of hay or grass crops.

"But when we increase the crop of grass in a meadow by means of gypsum, we remove a greater quantity of potash with the hay than can, under the same circumstances, be restored. Hence it happens, that after a lapse of several years, the crops of grass on the meadow manured with gypsum diminish, owing to the deficiency of potash. But if the meadow be strewn from time to time with wood ashes, even

with the lixiviated ashes which have been used by soap-boilers, then the grass grows as luxuriantly as before. The ashes are only a means of restoring the potash."

Keeping Sheep in Winter.

We have before us statements by several English gentlemen, which place in a striking light the importance of shelter, comfort, and quiet, to sheep. The writers appear to have had more particularly in view the fattening of sheep,—a prominent object in England; but the same principles will be found true for substance in regard to wool-growing.

Sir Richard Simeon, on the Isle of Wight, has accommodations for stall-feeding about 300 sheep at a time. He states that he has pursued the system for several years, and finds it fully to answer his expectation. The stalls are in close houses, with windows that are closed entirely at night in cold weather, and at other times opened more or less. The sheep are tied in their stalls and fed in troughs; and water is brought within their reach in the same way. The ranges of sheep stand back to back, and between each two ranges is a receptacle for manure, which, with the aid of a little gypsum, is saved in the most perfect manner.

The results are, as Sir Richard states them, as follows.—The sheep are very healthy, and in some instances individuals have gained a pound a day, live weight. In many instances the gain upon a large number has exceeded three pounds a head per week; general average two and a half pounds; and in reference to the time occupied in fitting the sheep for the butcher, the advantage of stall-feeding is immense.—The growth of wool is very rapid, fully corresponding to that of the carcass. The manure is of first-rate quality, not inferior to the best guano.

So essential does Sir Richard consider *warmth*, that if he were in a coal country, he says, he should be inclined to use artificial heat.

Rev. Mr. Huxtable, another English gentleman, has obtained similar results by feeding in close sheds, but without tying up. Others still, use moveable close sheds, so that their flocks feed off their turnip crops from the ground, as has long been generally practiced in England, and are yet kept warm.

Earl Talbot, lord Lieutenant of the county of Staffordshire, a zealous promoter of agricultural improvement, after sending his bailiff to examine the plans of Sir R. Simeon and Mr. Huxtable, has adopted, with some modifications, the former. It is not worth the while to give details, for they are not fitted for use among Vermont wool-growers. He feeds in close buildings, with ample means of ventilation, the sheep tied in narrow stalls, with arrangements for saving the manure and keeping everything neat and comfortable. His son, Lord G. G. Talbot, in a letter to Gardner Stow, Esq., of Troy, N. Y., dated Aug. 18, 1847, states the results as follows:—

"The sheep eat an almost incredibly small quantity of food—5 pounds of swedes and a very little chaff, and *oats* or linseed, or hay;—and I confidently assert that any sheep, let him be *healthy*, however poor he

may be, will, when tied up, be perfectly fat in three months, while the fellow sheep, if at large and exposed to the vicissitudes of our climate, will, during the same time, consume double the quantity of food and not be so heavy at the expiration of a given time as the shed-fed sheep."

He also mentions the great advantage in the amount of the manure.

"But these are growers of mutton in England; we want something for growers of wool in Vermont."—True. We expect, however, that Vermont will be proud of its mutton one of these years. But let that pass. We have the opinion of one of the most successful of Vermont wool-growers, founded on his own experience, in favor of the principle, as of immense practical value among us.

A preparation for winter is the order of the day for November, we take the liberty, in this connection, to state a few facts in regard to a plan of close keeping adopted by the Hon. John S. Pettibone of Massachusetts, who has one of the best flocks of Merinos in the country.

Judge Pettibone has a barn 40 feet by 30, which he fills with hay. Along one side and across one end of this he has erected close sheds, 15 feet wide, at an expense, including 60 feet of wall, of \$100. Living water, which never freezes, runs through the sheds, so as to accommodate the different flocks. Good Turk's Island salt is kept in boxes accessible to the sheep at all times. In this close shed he has for two years kept sheep confined. The sheep are divided, store sheep in one part, ewe lambs in another, buck lambs in a third, the divisions being made by the boxes from which both adjoining flocks eat, and of course may be varied according to circumstances. The barn being about a mile from the house, the sheep were fed but twice a day, with intervals of hay, including some wild grass, &c., and had not a particle of grain of any description. Yet he informs us that he never knew sheep do better. They consisted of about 100 yearling ewes, including some of different ages, and 102 lambs; and there was not a sickly sheep in the whole lot. Lambs are often subject to scours, but not one of these was so affected. After being confined on these narrow limits five months and two days, they all came out (except one which got hung in the rack) as well and in as good order as when put up; and this notwithstanding, he remarks, there never was a year before in which so many sheep died in that vicinity. Forty-two of the buck lambs were taken to Ohio, and sheared 5 lbs of wool each,—or rather, 50 bucks—42 lambs and 8 old bucks—averaged 5 lbs. The remainder averaged over 4 lbs. He has no doubt but wool on sheep thus kept is softer and of better growth than on sheep exposed to cold and storms.—They require, too, less fodder, and the manure is made more valuable.

The result, it will be seen, coincides for substance, with the conclusion of the English feeders of mutton in regard to all the three important points, economy

* Our description above does not give the exact space.—The shed is equal to about 100 feet by 15; the roof descending from the eaves of the barn to the top of the wall 7 feet high.

of food, good condition of the animals, and the increased value of the manure. The principle is, confinement and protection—comfort and quiet.

Now what you can add to the top of the heap in any such way, is clear profit. So much only stays in the purse as comes after the sheep is paid for. The remark is obvious enough, and the wool-grower may repeat it a thousand times; and yet he may fail to make, in the actual management of his flock, the legitimate inferences. He may not, in view of it, make it his aim by nice calculation and careful management, to save a few cents a head in keeping, or in manure, or add two or three ounces to the weight of his fleeces; and yet he would be far from indifferent to the equivalent of this in his sales, i. e. two or three cents a pound in the price of his wool.

Something may yet doubtless be learned in regard to the kind of food used. We believe it is getting to be more common to feed beans. Experiment shows that they are peculiarly favorable to the growth of wool. Chemical analysis tells us the reason;—beans contain more of the constituent elements of wool than any other kind of food.

WHITWASH FOR FRUIT TREES. The opinion has gradually obtained among novitiates and the uninitiated, that whitewash is promotive of the health and vigor of the trees whether planted for ornament or use. Nothing, however, can be more fallacious than such a belief. It must be evident to every judicious and reflecting mind, that a close and impervious coat of whitewash, or indeed, of any matter on the bark of a tree, must necessarily exert a very decided and injurious effect. We might as well paint and varnish the skins of our domestic animals, as to coat, in this way, the limbs and trunks of our trees. There is an analogy between the two so far as the offices of skin and bark are concerned. Both serve as a protection to the body, preventing external injury, and graduating the wonderful economy of absorption and perspiration through their pores. As the skin is the general covering of the body, so is the bark the general covering of the trunk; and the stopping or retarding of these phenomena necessarily produce disease and ultimate death.

A writer in one of the agricultural publications of the day, who seems to have awarded no small share of attention to this subject, in remarking upon it says:

“A lye of wood ashes, or water in which potash is dissolved, (which is the same substance,) will doubtless be as effectual in destroying moss, lice, &c., as lime—they are both alkalies, and will have similar beneficial effects; but as to injurious effects none probably will be produced from the lye.”

Soap suds is an excellent wash for fruit trees of all kinds. It cleanses the bark, stimulates the functions of the tree, and promotes, rapidly, the general health.

THE ORCHARD—How to increase the Fruitfulness of Orchards. Alkaline or ammoniacal preparations have been applied to young trees, as well as old ones for the purpose of stimulating their growth, and ac-

celerating their fruitfulness, such as whitewashing their trunks and branches, rubbing them with soap suds, and spreading round their roots lime, gypsum, charcoal, taut, ashes, &c. If you apply it to vines, or to young apple-trees, there is nothing that contributes more to make them bear an abundance of fruit; nor does this only produce a greater increase, but it also improves both the taste and flavor of the apples.—*Am. Agriculturist.*

Selected Lists of Apples.

Different cultivators, having equal acquaintance with different varieties, will not agree in selection; there are a few sorts however, which all will agree in pronouncing fine. Such sorts, may, therefore, be more confidently recommended to the novice, than those about which good cultivators will differ. A man who knows well a hundred different kinds, of reputation, by selecting a very few, will hardly fail to get such only as are truly valuable.

B. V. French, one of the most eminent cultivators of the apple in New England, gave the following as the six best apples, for early, medium, and late or winter ripening:—

Early Harvest,	Rhode Island Greening,
Porter,	White Seeknothfarther,
Fameuse,	Baldwin.

Another eminent New England cultivator gave for the three best apples, summer, autumn, and winter, the following:—

Williams' Red, Porter, Baldwin.

Another gave—

Early Harvest, Porter, Baldwin.

Stephen H. Smith of Rhode Island, who has grown and tested a hundred and fifty kinds, says that all the winter apples raised in New England, are not worth as much as the three kinds named, in the following list, given by him in the Horticulturist:

1. *Rhode Island Greening*: first for health of tree, bearing, keeping, and cooking.

2. *Baldwin*: good for bearing, table, and keeping.

3. *Roxbury Russet*: good for bearing and keeping.

A. J. Downing gives the following select list of thirteen hardy apples:

Early Harvest,	Jersey Sweeting.
Am. Sum. Pearmain,	Porter,
Large Yellow Bough,	Baldwin,
Red Astrachan,	English Russet,
Summer Queen,	Roxbury Russet,
Fall Pippin,	Rhode Island Greening,
	Yellow Bellflower.

It will be observed that the last list embraces all in the preceding lists, except Williams' Red, White Seeknothfarther, and Fameuse. These added, would give sixteen fine varieties. T.

LIFE PRESERVER FOR THRESHERS. The Ohio Cultivator, in speaking of injuries from dust, to the lungs of persons engaged in threshing, gives the following receipt as a preservative of life:—

Take a piece of the finest sponge, large enough to cover the mouth and nostrils, hollow it out so as to fit closely; tack a tape string around the outside,

long enough for the ends to tie over the top of the head; soak the sponge in soft water and squeeze the water out with the hand, then when ready to commence work tie it on tightly and evenly, so as to cover the mouth and nostrils completely. You can breathe and talk as freely through the sponge as without it, (though it will trouble those who use the "filthy weed,") and you can thresh where the dust from the machine rises like a dense fog around the head, and the lungs will be as free from harm as if you were hoeing corn.

MAMMOTH FRUIT. The editor of the Germantown (O.) Gazette has a pumpkin which is six feet in diameter and weighs 115 pounds. Mr. R. Maffit of Columbus, O., has produced an apple 18 inches in circumference, and weighs 28 ounces. Mons. Colle of Brionne, France, has exhibited a pear which weighs nearly three pounds, being 13 inches in circumference and 8 inches long.

UNDULATING ROADS. There is a popular theory that a gently undulating road is less fatiguing to horses than one which is perfectly level. It is said that the alternations of ascent, descent and levels call into play different muscles, allowing some to rest while the others are exerted, and thus relieving each in turn.

Plausible as this speculation appears at first glance, it will be found on examination to be untrue, both mechanically and physiologically; for, considering it in the former point of view, it is apparent that new ascents are formed which offer resistances not compensated by the descents; and in the latter, we find that it is contradicted by the structure of the horse. The question was submitted by Mr. Stevenson to Dr. John Barclay of Edinburgh, ("no less eminent for his knowledge than successful as a teacher of the science of Comparative Anatomy,") and he made the following reply: "My acquaintance with the muscles by no means enables me to explain how a horse should be more fatigued by traveling on a road uniformly level, than by traveling over a like space upon one that crosses heights and hollows; but it is demonstrably a false idea that muscles can alternately rest and come into motion in cases of this kind. . . . Much is to be ascribed to prejudice originating with the man continually in quest of variety, rather than with the horse, who, consulting only his own ease, seems quite unconscious of Hogarth's Line of Beauty." *Far. Library.*

THE POTATO ROT. At a recent agricultural show in Poughkeepsie, N. Y., Mr. Robert Van Amburgh, received a premium for the best specimen of potatoes. The following memorandum from him is published in the Poughkeepsie Journal:

REMEDY FOR THE POTATO ROT. Robert Van Amburgh, of Poughkeepsie, has raised two successive crops of Mercer potatoes, viz: one crop in 1846 and one the present year (1847,) perfectly sound and without any rot. The potatoes planted in 1846, were the small potatoes of the year before, and about the size of a hickory nut, or a trifle larger, and dug when green and before the usual time of digging, and preserved

through the winter. Those planted last spring were of the same kind, and were planted without regard to size.

The Markets.

BRIGHTON MARKET, Monday, October 25.

At market, 1800 Beef Cattle, 1400 Stores, 7000 Sheep, and 1350 Swine.

Prices. Beef Cattle.—Owing probably to the warm weather, no advance was effected. We quote extra, \$6 50 a 675; first quality, 5 75 a 6 25; second, 5 25 a 5 75; third, \$4 a 4 75.

Store Cattle.—Yearlings, \$12 a \$18; three year olds, \$22 a \$30.

Sheep.—Dull. Sales of lots at the following prices: \$1 33, 1 50, 1 62, 1 88, \$2 25, 2 62, and 2 75.

Swine.—Sales quick at an advance. Small lots to peddle, 4½ a 5½c; old Hogs, 5½. At retail, from 5 to 6½c.

NEW YORK CATTLE MARKET, October 25.

At market, 1811 Beef Cattle, 4000 Sheep and Lambs.

Prices. Beef Cattle.—The rain storm this morning interrupted business to some extent, but only about 200 remained unsold at the close of the week's business at night. Sales mostly at prices ranging, as in quality, from \$5 to \$7 per cwt. Of the offerings 600 head Southern, the rest New York State cattle.

Cows and Calves.—There were a smaller number than usual on sale this week. Prices firm at \$25 to 30 and 45.

Sheep and Lambs.—Sheep, \$1 25 a 2 50 to 3 75. Lambs, 75c to 2 50. Market abundantly stocked, and 400 left unsold.

BOSTON, Oct. 27. Flour—The market is a shade firmer to-day, and we quote sales Genesee \$6 7-8 a \$7 per bbl., and do. extra, \$7 a 7 1-3 do. Receipts at Railroad, 3721 bbls. Grain—Large sales Corn to the trade, and also for shipment to Liverpool, prices fully supported; Northern round 83, and yellow flat 80 a 82, measure; white, but little in market. About 7000 sacks New Orleans have been taken from stores for shipment, at 73 a 78 cents per bushel. Oats are in more request at 54c. for best Northern. Rye 95c.—little or none in market.

Wool. The stock of American Wool now in market is not large; Pulled Wool and low fleeces quite scarce; the demand is constant, and former prices continued.

Prime Saxony Fleeces, washed,	lb.	45	a	50
American full blood,		40	a	45
do 3-4	do	35	a	38
do 1-2	do	31	a	33
do 1-4 and com.	do	28	a	31

Cour.

ALBANY, Oct. 26, P. M. Flour—But little movement in Flour, owing to the difficulty of shipping the quantities now thrown on the vessels by the inability of the railroad to move the parcels destined for it. For straight brands Western, \$6 3¼ a \$6 50 is paid, and for Genesee \$6 44 a \$6 56½, afloat and from store. Grain—Sales Genesee Wheat at \$1 40. The demand for Corn takes all offering at 70c, reaching only 2400 bushels. Oats 45 a 45½c. [Argus.]

Oct. 27. Receipts of flour to-day amount to 2000 bbls; of corn 5000 bushels. We quote Genesee at \$6 50; Western \$6 3¼; Corn 71c.

NEW-YORK, Oct. 27, P. M. The Flour market remains firm, with a steady demand for eastern and home use; sales of Western at \$6 50 a \$6 56½; Genesee \$6 56½ a \$6 62½.—There is a good inquiry for Corn, mostly for the East; supplies are light, and holders are endeavoring to get the market up; sales of mixed at 73 a 74c per bush. Oats quick at 42 a 42c.

TO PREVENT WOOD DECAYING. Take twelve ounces of rosin and eight ounces of roll brimstone, each coarsely powdered, and three gallons of train oil. Heat them slowly, gradually adding four ounces of beeswax, cut in small bits. Frequently stir the liquor, which, as soon as the solid ingredients are dissolved, will be fit for use. What remains unused will become solid on cooling, and may be remelted on subsequent occasions. When it is fit for use, add as much Spanish brown, or red or yellow ochre, or any color you want, first ground fine in some of the oil, as will give the shade you want; then lay it on with a brush as hot and thick as you can; some days after the first coat is dried, give it a second. It will preserve plank for ages, and keep the weather from driving through brick work. Common white paint may be used on top of it, if required, for the sake of appearance.—Two coats should always be given, and in compound machinery the separate parts should be varnished before they are put together, after which it will be prudent to give a final coating to the joints or to any other part which is peculiarly exposed to moisture, such as water-shoots, flood-gates, the beds of carts, the tops of posts, and all the timber which is near or within the ground. Each coat should be dry before the parts are joined, or the last coat applied. The composition should be applied when the wood is perfectly dry. It is necessary to mention that compositions made of hot oil, should, for the sake of security, be heated in metallic vessels, in the open air; for when the oil is brought to the boiling point, or six hundred of Fahrenheit, the vapor catches fire, and though a lower temperature should be used in this process, it is not always possible to regulate the heat or to prevent the overflowing of the materials; in either of which cases, were the melting performed in a house, fatal accidents might happen.—*Archives of Useful Knowledge.*

NEW KIND OF PAINT. We have been informed that Mr. R. Shaler, of Madison, Conn., has invented a new paint which he says has been fairly tested and found to be applicable to wood, stone, and brick work, and also for inside painting. Old buildings and walls around his place that had stood for twenty years without being painted, have been operated on with success, and it is said to look well and is durable. It is manufactured and sold for 40 cents a gallon, ready for painting on, in various colors. We are not able to tell whether it is equal to linseed oil mixture or not. It is at least of but little expense.—*Scientific American.*

PUMPKINS. Large quantities of this vegetable are annually produced on most farms, and, while sound and good, are relished by most kinds of domestic stock especially by cows and swine. They, however, last but a short time, and when desired for culinary purposes, are generally dried in the same manner as apples. This is unnecessary, as by adopting the following method, pumpkins may be preserved through the winter, and even late in the following spring, perfectly sweet and sound.

Deposit, in some convenient place, from a foot to eighteen inches of clean, well-dried wheat, oat, or rye

straw, and place thereon a layer of pumpkins—the best and fairest of your crop; then another stratum of straw, and so on, till you have “stowed” your entire crop, or so large a portion of it as you may consider necessary for winter use. A gentleman in one of the inland counties of Massachusetts, writing to us under the date of March 16, 1845, says:

“I am now feeding my milk cows, and other stock, on pumpkins of last year’s growth. They were carefully packed in straw as soon as harvested, and are in a fine state of preservation. The butter produced from the milk is of the finest quality and richest color, and the animals themselves are in much better condition,—more active and healthy than I have ever known them when restricted to dry and unsucculent food.”—*Hallowell Gaz.*

BURDOCK LEAVES will cure a horse of the slavers in five minutes; let him eat two leaves. I have tried it many times. My horse will always use them when the slavers are bad.—*Ploughman.*

Domestic Economy.

SWEET APPLE PUDDING. Take one pint of scalded milk, half a pint of Indian meal, a tea-spoonful of salt, and six sweet apples cut into small peices, and bake not less than three hours. The apples will afford an excellent rich jelly. This is truly one of the most luxurious, yet simple Yankee puddings made.

TOMATO HONEY. To each pound of tomatoes allow the grated peel of a lemon and six fresh peach leaves. Boil them slowly till they are all to pieces, then squeeze them through a bag. To each pound of liquid allow a pound of sugar and the juice of one lemon. Boil them together half an hour or till they become a thick jelly. Then put it into glasses, and lay double tissue paper over the top. It will scarcely be distinguishable from real honey.

TO PREVENT FLIES FROM INJURING PICTURE FRAMES, GLASSES, &c. Boil three or four onions in a pint of water; then with a gilding brush daub over your glasses and frames, and the flies will not light on the article so washed. This may be used without apprehension, as it will not do the least injury to the frames.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy,	50 cents.
5 copies, sent to one address,	2 00
10 “ “ “ “ “ “	3 00
16 “ “ “ “ “ “	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. I.

WINDSOR, VT., DECEMBER, 1847.

No. 8.

THE SCHOOL JOURNAL.

For the School Journal.

Errors in Pronunciation.

No. II.

In the last number of the Journal, I noticed a prevailing error in the *principles* of pronunciation, which involved an immense number of words, and suggested what I considered remedies for the evil, equally simple and efficient. I now proceed to point out a few other deviations from correct orthoepy.

2. The second principle I would lay down is, that the vowels in most monosyllables assume different sounds, according as the words lie under the emphasis or the reverse. For instance, the word *me* has an entirely different sound in the following sentences:—*Give me the book; give me the book.* In the former the *e* has the obscure, in the latter the long sound.—The same may be said of the words *be, can, them, when, &c.* in the sentences which follow: It cannot be done; It cannot be. It can live; It can live. It ill becomes them; It ill becomes them to say so. He went when the moon rose; When did he go! In all the above instances, and they might be indefinitely extended, the word in the first sentence should have the obscure, while that in the second should have the long or the short sound.

This second principle is rarely if ever violated in speaking. But a nice observer will find it continually broken in all our schools, and in too many of our pulpits, especially in the reading of the Bible; so much so in both places as frequently to change the sense.

Here it is proper to observe, that the violation of these two principles is not objectionable merely on account of false pronunciation. It has also a pernicious influence on the beauty of the English tongue, destroying in a great measure its force and power, which depend mainly on accent and emphasis. For it must be obvious to the most superficial observer, that the words comprehended under the first rule have their accent destroyed by its violation; while the sentences in which the second is broken lose much, if not all of their emphatic force, by the wrong sounds attached to the vowels.

3. The third principle which I shall venture to lay down is this: The letter *a*, never takes the long sound at the end of a word; nor when used alone as a syllable at the beginning of a word, unless it is under the accent, as in the word *a'corn*. Let me enumerate a few instances, which might be extended to several

pages. At the end of words: sofa, era, pica, vista, comma, quota, stigma, strata, Laura, Jerasha, Rhoda, &c. At the beginning of words: about, around, ado, abandon, alarm, aloft, anonymous, away, &c. In all these, the *a*, both at the beginning and ending of the words should take the obscure, in place of the long sound commonly given them. Before leaving this vowel, I must not omit to mention, that when used as a word, it is almost always pronounced wrong. Worcester says it should be pronounced as in *hate* as a letter, as in *liar* as a word. Here again let me recommend a recitation from the dictionary, especially from Worcester's, under the letter *a*, as the easiest method of correcting this series of errors.

4. The fourth principle is, that the *h* should not be sounded, and the *a* should take the obscure sound, in the syllable *ham* (a contraction of hamlet) at the end of a large number of proper names, such as Pelham, Oakham, Hingham, Chatham, Cheatham, Petersham, Effingham, &c. This rule is violated more particularly in Massachusetts, where many of the old English names are preserved. But everywhere school-boys are at a loss for the correct pronunciation of such words.

I conclude, for the present, by a few observations on a subject intimately connected with pronunciation.

The *n* in the numeral adjective, or, as it is commonly called by grammarians, the indefinite article, *an*, is dropped, for the sake of *euphony*, when it precedes a word beginning with a consonant sound. Now the letter *h*, at the beginning of a word is sometimes silent, sometimes pronounced. In the former case, the word begins with a vowel sound, a takes *an* before it. In the latter, the word begins with a consonant sound, and the *n* should be dropped. But printers, to whom this matter is commonly left by authors, are not always competent to the task; and when competent, are not always willing to take the trouble to discriminate. Hence we find in many books, in the Bible as well as in others, the article uniformly printed with an *n* before every word beginning with an *h*, while other printers are careful to use the *n* in its proper place only, that is, where the *h* is silent. But this is not all. Words beginning with *e* and *u* sometimes commence with a consonant sound, and hence the *n* is dropped, for the same reason that it is retained before the silent *h*. The *n* therefore, should be dropped before the word *one*, since it begins with the consonant sound *ic*, and before *union*, because it begins with the consonant sound *y*. But many printers are ignorant of this distinction; and hence we often find the *n* improperly retained before such words; nay, we

very frequently hear it pronounced, by those whom, from their education, better things might have been expected. One of my old friends, a college graduate, who was otherwise uncommonly correct in such matters, insisted on retaining the *n* before the word one, *when he read the Bible*, because the words "such an one" recalled pleasant associations! forgetful, seemingly, that if we all took such liberties with our native tongue, if we all allowed our feelings to run away with our judgment, the English language, the joint property of the Anglo-Saxon race, on whom the sun never sets, would soon be cut up into despicable dialects.

The words *thy* and *thine*, especially in old books, are regulated by the same principle; *thine* being used before a vowel sound, *thy* before that of a consonant. Hence we have, in the Bible, *thine army*, and *thy brother*. But printers who are careless, or unable to discriminate, make the same blunder here that was noticed in speaking of *a* and *an*. They print *thine* uniformly before words beginning with an *h* or a vowel, as if all *h's* were silent. Thus, in many Bibles, though by no means in all, you will find *thine house*, *thine heart*, as readily as you will find *thine hour*.—Now if this blundering was confined to the printer, it would be less objectionable. But our ears are but too apt to be offended with these harsh sounds in schools, and in other places where they might less be expected.

The plain and simple rule which regulates the use of *thy* and *thine*, *a* and *an*, is this: *Thy* and *a* are used before words beginning with a consonant sound, *thine* and *an* before words beginning with a vowel sound. To those on whom Nature has bestowed a musical taste, the matter might be regulated entirely by the ear. P.

Pittsford, Oct. 28.

For the School Journal.

What shall we do to secure a Good School the coming Winter?

HINTS TO PARENTS.

How *very desirable* an object, is a good SCHOOL! You who are parents *feel* it to be so. You cannot grudge the necessary expenditure of means to secure it; you will cheerfully make some *sacrifice* for it, if need be.

The teacher is already engaged, and much, very much must depend upon him, but not all. He cannot *alone* make a good school. There is something for you to do, besides paying your share of his wages; and the success of the school depends in a great measure upon your doing it. Allow me to suggest some things important for a parent to do.

1. Be careful of the teacher's reputation. Do not speak disparagingly of him in presence of your children. You wish him to benefit them; but you will put it out of his power to do so, if you destroy their confidence in him. Even though he be not all you could wish, and not the man of your choice, now that he is employed, make the most of him; and especially place no obstacles in his way. You may thus tie the hands of a good teacher. Be cautious that your children do not imbibe a prejudice against him

beforehand. Endeavor as far as possible, by your manner of speaking of him, and treatment of him, in presence of your children, to inspire them with confidence in him. Speak approvingly of his plans and management in school, so far as you can conscientiously.

2. See that he has your children to benefit the *whole six hours of the day*, and *every day* in the week, so far as possible. Tardiness, and irregularity of attendance are *very great* evils. The progress of the individual scholar will be retarded thereby *more* than in proportion to his absence. And then his irregularity will be a great annoyance to the whole school, and greatly reduce the amount of good which might otherwise be accomplished. Submit to a little sacrifice, then, rather than have them *late*, or *absent*.

3. Do not be hasty to take part with your children against the teacher, when they are corrected. The other extreme formerly acted upon, rarely now, was, if they were punished at school, *take it for granted* they have received less than their deserts, and chastise them at home. This might not be best to act upon as a rule, yet a less dangerous one than to *pity*, and *take it for granted* they are abused. You do your children a *less injury* by the former, than the latter course. Punishments may be, and in some instances doubtless are, unreasonable, and severe, yet the *presumption* is if your children are corrected at school they *deserved* it. And better they should suffer a *little injustice* at school, than be spoiled by false sympathy at home, and encouraged in resisting authority which should be respected. A little undue *severely*, is better than insubordination and anarchy. No teacher can maintain good government without the coöperation of the parent. And if every parent's child, or if *your* child, when corrected, is to receive sympathy at home, there must be an end of school government.

4. *Visit the school*. Do not wait for Mr. A. or Mrs. B., but go *yourself*, and invite your neighbor to go. Go near the *commencement* of the school; and *repeat* your visits. Say not you are not *qualified*, you surely know the way to the *school house*! then you are qualified to benefit the school. A *visit* will do good, though you say not a word. Show that you are an interested listener; that you are interested in the success of the school. You will in this way stimulate both teacher and scholar. TRY IT. R. C.

The Morals of School.

We lately noticed, in the Catalogue of an Institution which holds a high rank among New England Academies, and the Principal of which is a clergyman, a sort of apology for a Biblical lesson which is required once a week. It struck us as a singular evidence of the state of the public mind in regard to religious instruction in schools.

Situated as we are, it is only in those schools which are endowed by religious persons or supported by the tuition fees, that any thorough course of scriptural instruction can be undertaken;—we mean such a course as shall embrace the whole of Christianity as received by any one denomination. Our public schools must be kept free from what is deemed sectarian.

Still there is a vast field for truly religious education in all our schools; and it is painful to think how little the Christianity of our Christian country appears in them.

Our ideal of a teacher of a public school would include a truly Christian spirit, fed by a thorough familiarity with the Christian scriptures, and a habit of appealing constantly to the Divine authority in regard to all the affairs of life. By such a teacher we should expect that the school would be treated as a company of Christian children. We should expect to hear them addressed as persons who acknowledge the Divine authority of the Bible, who believe the truths revealed in it, and who intend to live in conformity with its precepts. He would, as much as possible, bring Christian motives to bear upon the discipline and employments of the school; and there would be a constant endeavor, not only to *teach* the young, but to bring them under the influence of Christian principle.

It has been the approbrium of New England schools, that the morals of the children are not improved by attending them. They have been called "schools of vice;" and with too much truth. In regard to character, to what is most essential in the man and the woman, how many there are that get more of evil than of good at the district school! Surely in a Christian community this ought not so to be.

It would be wrong to cast all the blame upon teachers. They generally reflect, in this respect, the feelings of their employers. The people have not felt the importance and seen the practicability of giving a pure and elevated moral tone to our common schools. They have been too generally content, if only the children are taught to read and write, &c., without thinking, as they ought, how important are lessons in the science of right and wrong, and how easily our schools might be made to influence for good the whole tone of society in regard to manners and morals—principles and habits.

Let parents think of this. Let them frequently speak with teachers about it. Let it be felt by those who have charge of the education of the young, that they are not permitted by public opinion to let the *character* take its chance, and give their whole energies to the intellect,—to develop which without a corresponding culture of the heart will be far enough from making good citizens.

Employments for Winter.

A. "Some Irishman has remarked that the Irish soil is too good. It gives the cultivator food with little labor. The consequence is, that the Irish are poor, thriftless, and ignorant. In Scotland, on the other hand, the soil is so hard that one has to dig in earnest for a living; and hence Scotland has become as a garden,—a perfect model of skilful and profitable husbandry."

B. "No. The cause lies far deeper than that. In the Scottish town where I was born, you would see, of a Sabbath morning, all the avenues leading to it thronged with peasants from the surrounding country,—all on foot—fathers, mothers, sons, daughters—

and coming four, five, or six miles, often, to the Kirk. Within the Kirk you would see from one to two thousand hearers, the men, though in homely garb, looking like senators. For the most part they were the poorest of the poor,—such that, in this country, no one would think that, with their scanty means, he could possibly make out a living. Yet with even these the rule was, that *the children must be educated*: the expense of sending them to school must first be provided-for; and for food and raiment they must contrive to get along with what remained. Thus the very poorest aim *first* to put their children in the way of improvement, and of advancing to some higher station. In Ireland you see nothing of all this. There the father cares nothing for the child's education.—The children grow up as it happens, and go through the same reckless life with their fathers and grandfathers. It is the education and the deep religious spirit of her people, that makes the agriculturists of Scotland a model; not the ungenial soil, but the thoughtful, disciplined minds."

The Scotchman was right. Strong hands make the fields bright and beautiful and rich, when guided by active and well-informed minds. And within doors, if an intelligent and tasteful house-keeper presides, every nook and corner will "bear witness of her."

Among all the employments of winter in Vermont, what will you compare, in importance, with the education of children? On what else does the well-being of the State—its character, its thrift, its progress in all that is esteemed desirable among men—so intimately depend? In what else are so large a part of our population actually engaged during the winter months, as in attending school? And what time of life is more important, than those months and years that are thus employed? At what other age can you with more hope bring noble motives to bear upon the young soul, and give new vigor and a happier direction to its energies?

Let us look out then for the winter's business.

SCHOOL ECONOMY. The expenditure of three or four thousand dollars for any public purpose is thought a very grave matter; and the party newspapers are ready to make the most of anything of the kind that can be made to appear like a want of economy in public affairs. And yet the people of the state waste ten or twenty times three or four thousand dollars, every year, by not sending their children to school regularly and punctually. This may seem extravagant; but let the reader apply his arithmetic. Let him estimate the expense of the school—let him ascertain how much time is lost by irregular attendance—and let him inquire into the influence of irregularity and tardiness upon the success of the school and the progress of the scholars;—and he will find that it comes short of the truth.

Sheridan wrote: Women govern us; let us try to render them perfect. The more they are enlightened, so much the more so shall we be. On the cultivation of the minds of women, depends the wisdom of men. Napoleon said: "The future destiny of the child is always the work of the mother."

To Secure Attention.

THE BEST MANNER OF CONDUCTING RECITATIONS.

It is of the first importance to success, that the attention—the earnest attention of the whole class, should be secured, to every question. It is painful to see half or three-fourths the children listless and inattentive except when “it comes their turn.” A good teacher will contrive to prevent it.

The Boston School Journal has some good remarks on the best method of conducting recitations with this view, which we copy.

THE BEST METHOD YET DISCOVERED.

It is to ask the question generally, to the whole class, without giving the slightest indication, either by look, gesture, or position, who will be called upon to answer; or on what portion of the class the duty of answering will fall. This idea is very important. If the teacher, by position, gives any clew either as to the person or the neighborhood where his question will ultimately be fastened; or if from day to day, or from lesson to lesson, he has an order of proceeding which may be discovered, he fails to comply with one of the essential conditions of this method, and defeats the plan he should practise. What we insist upon is, that, after a question is put, and until the individual is named whose duty it is to announce the answer, it should be as uncertain who that individual will be, as it is during a thunder shower where the lightning will strike the next time.

After the question is propounded, let a sufficient time elapse, in entire silence and without motion, for each pupil in the class, or for all the pupils of ordinary intellect in the class, to prepare mentally the answer which he would give should it be his fortune to be called upon. No show of hands or other signal should be allowed, save that signal which no mortal power can suppress—the illumination of the countenance, when a new truth, like a new sun, is created in the soul. The teacher must exercise his discretion as to the proper time for waiting. He must be governed by a rule made up of two elements,—the difficulty of the question and the capacity of the class. A proper time having passed, let the hitherto unknown pupil, who is to announce the answer, be now made known. If the answer should be incorrect, or if the one called upon should make no reply let another be named. Here is no occasion for waiting again. Should an erroneous answer, or no answer, be received from the second, let a third be called upon. Should the third fail, perhaps this will be as far as it will be expedient to proceed in this method. Let the question be then thrown open to the whole class; and, if it has been framed with judgment, some one in the class, in forty-nine cases out of fifty, will be able to answer it. Should it often happen that no one in the class is able to answer the question put, it will prove the teacher to have been in fault; for it will show that he has misapprehended the capacity of the class. Another question will then be given, and so on until the recitation is finished.

Now, is it not clear that the method last described

tends to secure, and if conducted with ordinary skill, will secure, the attention of the whole class? Each mind will act upon each question. In a class of twenty, twenty minds will be at work. As a mere means of acquisition, then, to say nothing of intellectual habits, the latter method is nineteen times better than the former. We verily believe that, if a change *only* in *this one particular* could be introduced into all the schools of Massachusetts, it would forthwith give them four-fold efficiency, as a means of improvement.

The above views do not apply with equal force to all studies. There are some branches, where other means of securing the action of each mind may be resorted to. In arithmetic, for instance, different questions may be assigned to different members of the class, to be wrought out simultaneously. But we need not go into detail. Every competent teacher, in applying a general rule to a variety or a diversity of circumstances, will be able to make the proper allowances and modifications.

The method here recommended, it will be seen, not only secures the attention, but cultivates a habit of rapid thought and of prompt reply. It keeps the class *alive*; and one answer given promptly and with life, is worth half a dozen drawled out after the listener's patience has been exhausted by delay.

Hints to Teachers.

GEOGRAPHY—HISTORY—READING—COMPOSITION.

[By Miss ROBINS,—in the Teachers' Advocate.]

Geography I never lose sight of. I identify every fact by its relation to some place; and give every place a character by its position on the globe, and some points of its history. Maps, ancient and modern, often compared, and always in connexion with the whole globe, are my perpetual helpers. Every event happened *somewhere*, and at some time. Chronology is not accurately recorded. Men are not well agreed in dates, but sufficiently so to fix a plausible, and satisfying order, to the great events that bear chiefly upon human progress. Ancient geography is not more exact. No precise surveys of the ancient world were made for any aggregate record. All pretensions to nice topography in regard to it, are disputable. The *precise fact* is of no real consequence; but the proximate fact, the relative fact, is of great importance to the understanding of books in general. Admitted probabilities make many inferences from them valuable. In reading Lord Bacon's Essays, not long ago, I could not have comprehended them if I had not been informed of the long accredited history which has been disputed every inch by Neibuhr, Arnold, and Michelet in our time.

It is well to learn that Alexander the Great was not a contemporary of Solomon, but lived nearly seven centuries after him. The odd years more or less than the seven centuries that elapsed between the king and the conqueror of Palestine do not affect the facts that one was a desolator of nations, and the other a peaceful sage and a benefactor of men; and that both, as a warning to all men, gave themselves to “know madness and folly.” It is well to learn that Homer is supposed to have lived five hundred years before Soc-

rates,—though some German critics say that he never lived at all—and that certain Hebrew prophets, themselves essentially poets, lived between the two. It is well to fix Jerusalem, Athens, and Rome in the mind at their respective distances from our abode, and in their relative places. These cities yet exist, and bear their ancient names.

A cheap Globe and a cheap Atlas for every teacher, will always make up to her for the deficiencies of outline maps, that must be filled up by conjecture, and forgotten in no long time. Rational geography and chronology, more especially the former, are interpreters of history, poetry, and even of natural history.—This sort of information teachers can gain for themselves. I learned my own geography of the Greeks, from the second book of the *Iliad*, and an old French atlas. The means of self-instruction are cheap, and when we avail ourselves of them, will enable us to teach others with facility and pleasure. When the blind lead the blind—for we are blind beyond the region of bodily vision, till the ample page of recorded knowledge is displayed to us—the task of guiding is a most dreary toil for rational beings; when the matter is to be taught, and the way to teach are plain before us, then we advance readily and satisfactorily.

When I recommend certain pursuits to the teacher I do not expect that she is to teach the learner the very thing acquired and enjoyed by herself; but that from treasures new and old, and constantly accumulating, she will find much to increase the facility and pleasure of instruction from ordinary means, much to interest the pupil, and much to augment the value of her services to society. Books of Biography, of Voyages and Travels, and of poetry, are more instructive than novels and tales. But they are not so inviting, so agreeable, say some. Why not? Because we are not educated to the preference of truth above all things. Some of our first reading is little, frivolous tales, to which no real moral meaning is affixed, and we are not often taught the surpassing value of what is true. Our moral and rational nature is not educated to the love of truth in the pursuit of it. If we have been so neglected, we must correct ourselves. No person disputes that it is our duty to *seek truth*; to avoid all misrepresentation of it in our intercourse with mankind. It is not only our duty to *seek truth*, but earnestly to seek for it as for hid treasure.

"Buy the truth, and sell it not," says the Scripture. *Buy the truth* by sacrificing inclinations and habits that are adverse to it. Give up the practice of light and unprofitable reading, and substitute for it some more laborious pursuit of knowledge. *Do not sell the truth*; that is do not barter it for frivolous books, and trifling conversation; give your leisure hours to better things, to better thoughts. Let your studies be rational and elegant—let them enlighten your mind and refine your taste. The teacher, of all persons in the world, ought to possess a well-furnished mind.

I recommend to young teachers not only to read for their own edification, but to write with the same design; but not to write speculative essays, and bad verses, Dr. Arnold, the distinguished master of

Rugby School, himself an excellent writer, thought the best mode of attaining a good method, and a well formed style, was to take a book, and reading portions of it, to rewrite it all, consecutively. Such a process involves ten times the thought and diligence that the ordinary method of composition requires, and would keep up a continuity of interest in some given subject. A lady of my acquaintance, once set her son to writing out all he could learn concerning Samuel, from the Old Testament. He had made compositions at school with no utility whatever, but this required research and reflection very profitable in the end, and it commenced a practice and course of inquiry very serviceable to him afterwards. I have given my young pupils *Æsop's Fables* to rewrite, requiring them to add the natural history of the respective animals introduced in the fables; which they must, of course, find out some particulars of, before they could carry out the design. Every teacher should read the life of Franklin. His admirable self-education is an example worthy of imitation. He made abstracts and transpositions of other men's thoughts, that he might better express his own. Who ever wrote with more force and cogency?

Narratives of objects seen, and excursions made, are a useful sort of composition. *Letters*, if they are not filled with egotism and sickly sentiment, may be written to the advantage of the writer.

First Principles of School Government.

From a Lecture, by Rev. John P. Cowles, of the Ipswich Female Seminary, delivered before the Massachusetts State Teachers' Association.

Government implies law; law implies *penalty*; and all penalties must be more or less severe, or they are nothing, and less than nothing.

But where shall penalty touch the offender? In some sensitive point, surely. It must touch him where he is and *feels*. Punishment is not a surgical operation, that Dr. Morton's preparation should first be inhaled. What is punishment that is not *felt*? And why may it not make itself felt in *any* sensitive point? Why this overgrown fastidiousness about *corporal punishment*? Why such exquisite care of the *body*, as though it were *not* made of clay; or *were* made of glass?

He is an *enemy to justice*, who would narrow the space for inflicting it, beyond due bounds. As to corporal punishment, the question is easily settled. The *Author of Nature* inflicts it, and we *may*. Since He does it, it is, in general, neither unwise, nor base. If we surfeit, he punishes with a headache, perhaps with a fever. If we do the same for years, He may end our lives with apoplexy. If we do but put the end of a finger in a candle, we are burned; our *flesh* is burned. The remonstrance of Nature is not *verbal*; it is *corporal*. If we misuse our eyes, we are punished in the eye, and with pain, often acute and long, sometimes remediless. If we tax the brain too hard, *weariness, vertigo, inflammation, insanity, idiocy, death*, may be and often are the consequence. It is all from the mild and indulgent Author of Nature, wonderful in counsel and excellent in working,—infinitely older

than we are, and infinitely more experienced in governing both flesh and spirit than the late-born reformers of the 19th century.

If the notion and the practice be barbarous, what is the character of its Author and Contriver? Will it be said, *it is all Nature!* Certainly all this is *Nature*; and therein is the strength of the argument. It is not only God working, but working habitually, with set and original contrivance, planned of old, in the beginning or ever the earth was, in order that it might do its work with unfailing and mechanical precision. Nothing shows design plainer. An invisible hand, plying the scourge on a culprit's back, would not be so clear proof of design to punish in the body.

The discipline of school, in its general spirit and tone, should harmonize with that of Nature's Author, and not vainly seek to oppose and thwart it. Nature cannot be changed, but can and must be followed.—She is easy, and even indulgent, to her followers; but inexorably hard to those who kick against her. The *Descensus Averni* is not so easy as it is to float along with the course of Nature, which is the standing will of God; nor is anything more thoroughly impossible than to resist and thwart her established order and course.

Let children, then, be trained, as the God of Nature evidently would have them;—to deny themselves, to govern the eye, the ear, the thoughts; to quell the rising desire for things unlawful;—to bear and to forbear;—to be happy even without comforts; to be blessed without luxuries, in the simple, but exalted work of doing their duty. Bright and unfading is the crown of that teacher who thus inures many to the ways of righteousness.

It can do no harm, and must be beneficial in its results, to *approve all that can consistently be approved*. The teacher should be always ready and happy to say, "*That is right.*" The analogy of Nature confirms these observations. A conscience void of offence, and full of peace; the favor of the good, the smiles of Providence;—these are proofs of the Author of Nature's *approbation* of right conduct. They are not bestowed with a stinted, but with a liberal hand, as though it were really his delight to smile on us, whenever our conduct is such as to put it in his power.

He does not stop at mere approbation; but largely rewards the faithful use of his gifts. Fidelity in that which is least, advances to the care of that which is greater, alike under the natural and moral dispensation of God. No false dignity, no stoic severity, hinders him from lifting the light of his countenance on the good and obedient, nor from pouring out his complacency, in full tide, upon them. Even here, in this life, he blesses imperfectly right behavior, far above what we might have expected, or could have had any courage to ask; with evident signs of somewhat more and farther, in reserve, to be bestowed hereafter, to which this present is but a beginning.

If the Supreme and Infinite One feels, and, without loss of dignity, with gain to his authority, can thus express complacency in good behavior;—should we bestow praise with hesitating lips, half-giving, half-withholding, lest discipline should suffer, and smiles breed familiarity, insubordination, and contempt!—

Such results would only show that we had approved and rewarded in the wrong place. The principle would remain untouched. *Praise, then, where you can, if you would give discipline its full power.* The censure of him who can approve nothing, is worthless and ineffectual; and so, also, is the smile of him, who never condemns. But the censure of him whose delight is to bless, who seizes every opportunity to reward, and whose strange work is condemnation, comes with crushing weight. It forces the conviction, that we are wrong.

The Best Possible School.

We do not copy the following because we suppose the school mentioned to be the best possible. It may have many superiors, for anything we know; and the best possible school does not probably yet exist on the earth. But it is useful to form the best conception we can of a perfect school, in order that we may bring our own as near to the standard as circumstances may allow. This school is in Boston, and is adapted to the wants of those who are able to pay for it. And the pupils are consequently select, and such as attend for the purpose of improvement.

A district school in Vermont must be kept in a room of cheap construction, and cheaply furnished. But is there any *good* reason why it should not be as neat and comfortable as the rooms that the children live in at home? The school must be open to all;—and of course some will attend who have little taste for study, and whose parents do not appreciate its advantages. But cannot obstacles of this kind be overcome by united labor and perseverance, so that the school shall be just as orderly and industrious, and therefore just as pleasant, as that of Messrs. Adams and Weld? Let parents, teachers, and pupils, aim intelligently at *perfection* in a school, and happy approaches towards it may be made anywhere.

MESSRS. ADAMS AND WELD'S SCHOOL. Boston is highly favored in regard to her schools, both public and private. While sojourning in Boston, we gained permission, on the strength of old acquaintance, to visit the school of Messrs. Adams and Weld for young ladies.

Their rooms first attracted attention. They have three. One is a large dressing room, bordered with clothes-hooks numbered to correspond to the numbers of the desks. It contains also other useful articles, —a sink and its furniture, an umbrella stand and shoe box, both divided into numerous compartments, and numbered like the desks. Then comes a well furnished recreation room, containing a portion of their library, apparatus, &c. In the third and principal room, the whole arrangement is marked with order, neatness, and taste. It combines the comforts of a parlor with the conveniences of a school-room. Nothing wanting, nothing superfluous, from the carpet to the ceiling.

Each pupil was seated in a chair before a mahogany desk, enjoying the comforts of home, with only so much restraint as the pursuits of a school require, and even *that*, there seemed to be no visible power to impose. Without any show of government, there ap-

peared to be spontaneous order, industry, happiness. Every eye beamed with intelligence and pleasure, denoting a high degree of mental activity.

Knowing well the utter contempt of both these gentlemen for the superficial methods too prevalent in our schools, we watched with interest to see how far they had come down from their elevated standard to meet the tastes, as we supposed, of school girls; for we knew them both in former days, as teachers of young men. Our suspicions had wronged them, and wronged their pupils. They had not descended at all, but with perfect reciprocity of interest on the part of their pupils, they were teaching Latin, Mathematics, History, Mental Philosophy, &c. with the same acumen and precision, which marked their instructions, when they had male pupils, with this difference only, that both teachers and pupils seemed to have reached a higher standard than in former years.

The most pleasing feature of the school was the high moral tone which marked every proceeding. The elevated moral principle of the teachers seemed silently to diffuse itself through the school. The single purpose to do right, appeared to be the pervading and controlling power.

When recess came, (and this is given once an hour) the scene changed instantly, from study to agreeable recreation, participated in alike by instructors and pupils. A bell tinkles once or twice. Instantly, as by magic, silence and order return, and the graver business of the school is resumed. A happier scene we have seldom witnessed, nor a school which we should prefer for daughters, if it were our lot to have them instead of sons to educate.—*Corr. of Christian Mirror.*

HOW TO AWAKEN THE CONSCIENCE. What then are we to do to awaken the conscience, on the supposition that it has not already been done before the child is sent to school? I say *awaken*, because I believe that instruction can do nothing to create what does not already exist. The conscience is there, at the bottom of the heart; but it may be that it sleeps. From utter neglect it may have become torpid. The fire kindled by the hand of God still burns; it is not extinguished, though it may give no light; it may be dim from a parent's neglect; it may be smouldering under the ashes of early sin. What shall we do to rekindle it and raise it to a flame? What have the teachers of righteousness in all ages done? What the inspired lawgiver and prophets of the Jews? What did the Savior do? He addressed himself directly to the conscience. "Swear not at all." "Resist not evil." "Give to him that asketh thee." "Be ye perfect." "Seek ye first the kingdom of God."

So must we address ourselves directly to the conscience. But to be felt, the address must come from the conscience. Formal words have no effect. Dull dissertations, or sermons upon duty, serve only to create apathy. Words that burn, must come from a heart kindled as by a live coal from off the altar. A few such words, uttered from a deep and sincere conviction of duty, go to the conscience, and will hardly fail to arouse it. If the children have been made fa-

miliar with the vital moral teachings of the New Testament, it will be sufficient to show, of any particular duty, that it flows naturally from that fountain; or that a particular vice is forbidden, directly or indirectly, there. If the child be not familiar with these truths, the teacher must hasten to make him so. And for this purpose the lessons of the Great Teacher must be daily read, and their application to the whole circle of human duties pointed out. If any one finds that he can gain light from other sources, let him obtain it thence. I only say that, for myself, I must go first to Jesus Christ. In his Sermon on the Mount, and in his other discourses, I find instruction which the voice within me assents to and confirms, for which I look in vain to all other beings that have lived. In his parable of the talents, I find a command which comes with more authority, the more I dwell upon it, to cultivate to the utmost every faculty with which I have been endowed; and this is the lesson which it may teach others.—*Geo. B. Emerson's Lecture.*

School Books.

At the suggestion of a friend we insert the list of books recommended to be used in the schools in this State by the State and County Superintendents in October, 1846. A further recommendation in regard to Arithmetics was made this year, and published in our last. The list agreed upon in 1846 is as follows: Webster's Common School Dictionary.

Sanders' Primer; do. Spelling Book and Readers; and when a greater variety of Readers is required, Palmer's Moral Instructor, and the Educational Reader and Moral Class Book by S. S. Randall.

Mrs. Willard's Abridgement of United States History.

Smith's First Book of Geography for beginners, and Quarto Geography; also, Morse's Quarto Geography, for reference, and Mitchell's Outline Maps.

Wells's School Grammar.

Shurtliff's Governmental Instructor.

Colburn's First Lessons.

McElligott's Young Analyzer.

Holbrook's Self-Instructor, No. 1.

Root's System of Penmanship.

England saves the expense of public schools, and the saving costs her fifty millions of dollars a year in courts, penal colonies, and in poor rates, not to reckon ruined hopes, broken hearts, blasted characters, and the wretchedness of tens of thousands living in shame and agony, a living death, whom free schools would have brought up to honor and happiness and a useful life. England has left the public morality to take care of itself, and the comment is heard in groans and written in blood.

Uncourteous habits have prevented many a man's success in life. Hasty, hot-brained, care-for-nobody individuals often plunge themselves into difficulties in consequence of their arrogant or overbearing manners, or their rude and ungentlemanly language, though it may be thoughtlessly expressed. It is often, not the great, but the little acts of incivility that are treasured up and remembered.

Use of the Bible in Schools.

I earnestly recommend the Scriptures to the young teacher;—not only in detached parts, but as a whole;—not only as a book of devotion, but as one of history and poetry. I request her to read the Bible as connection with Geography, and in its relations to universal history. It is sometimes recommended to read the Bible without note or comment. I do not read it thus, because of its antiquity, and its allusions, and forms of oriental expression; for my use it requires a little exposition. What is called *Townsend's Bible* gives the whole narrative in order, with illustrations.

The first chapter of Genesis describes the order in which the Creator establishes that system of nature which has been continued to our days. Theology, astronomy, geology, and the origin of animal life may be traced to it; these sciences are not there developed to the stage of recent discoveries, not even intimated in scientific language, but the latest developments of science confirm this primitive revelation. This announcement of omnipotent wisdom and love does not describe the exact mechanism of the heavens, but it declares the *Great Architect*, who said "let there be light and there was light," who marshalled the sun, moon, and stars, who made the sea and the dry land, who clothed the earth with beauty, who called life from inanimate matter, and who gave dominion over every creature to our common progenitor and his descendants;—to us, children of one parent,—members of a great brotherhood, whom he has endowed with one human heart, and with intelligence to look back from our own brief day of mortal existence to the far off beginning of our race, when he saw all that he had made, and beheld it was very good.

This ancient book proceeds with the history of mankind. I always keep a little globe of the earth before me, fastened to a pin which is inclined $23\frac{1}{2}^{\circ}$, and which can be taken into small hands, and explored all over, without legs and rings to obscure first perceptions of land and water. I show the young learner where, *probably*, dwelt the only family that survived the Deluge, twenty-three centuries before the Advent of Christ. I trace on the surface of the globe the presumptive divergency of those primitive families whose posterity forms all nations, kindreds and tongues of the many peopled earth. I fix the point where we, the observers, are placed, and those points where the ancient Hebrews, Egyptians, and certain contemporary nations once flourished.

I make that Hebrew State the starting point of all history, and even of all geography. There, in *Western Asia*, religion first set up the "earth's one sanctuary." The Bible becomes to me and my scholars a book of law, of morals and of poetry; legislation, virtue, and even the *song of the muse* belong to it; the last either by resemblance, or by contrast. Those beautiful hymns called the Psalms, the achievements of David, and the wisdom of Solomon, have all a special connection with the patriarchal history which preceded, and the gospel history which follows them. From the Old Testament we learn something of the manners and moral condition of mankind, before the "fullness of time," in God's plan, developed the

whole will of the Great Disposer in respect to our race; revealing the extent of human virtue, and the final destiny of the human soul. The language of praise and prayer, caught from the sweet singer of Israel, sanctifies our lips. The New Testament, meant for all persons in all conditions of life, brings a new dispensation to all men. But to whom *first*?—To the chosen people; and next to Greeks, surrounding them and incorporated with them to the Roman Empire, of which Judea was a province, and which in the gospel is emphatically called "all the world;"—and through those great civilisers,—along with arts, and maritime discovery, and peaceful commerce, in God's own time, to all mankind.—*Miss E. Robbins.*

You have, I will suppose, under your tuition, a little boy, eight or nine years of age. It is a most interesting period of life, and the charge is one of the most momentous nature. I can conceive of few employments more delightful than the training of such a child, and there is certainly none which is more responsible. Every touch you give makes its mark, as the fingers on a mass of ductile wax. You scarcely say, or do, or omit anything, without contributing in some way or other, to form the character of your pupil. He finds an example, for good or for evil, in everything about you.

Almost every child has some trait which tries the temper of the teacher. He is stubborn, or forgetful, idle, or hasty; these are great faults, but that of the teacher who loses his temper, is greater. Patience is a virtue which is especially demanded in the work of instruction; but for this reason, above others, that all impatience on the teacher's part, disturbs in a high degree the process of communicating moral truth.

To make a child angry during his lesson, is to give him his food scalding hot. Let the operation be repeated a number of times, and he will contract a dislike for the teacher, and the teachings. Every unkind feeling thus engendered in his little bosom, will go a certain length towards fixing an evil habit upon him. From such causes human character receives its impress.

SCHOOL BOOKS. The Minister of Public Instruction in France, has offered the prize of a gold medal worth 6,000 francs, for a reading book for primary schools, to inculcate elementary knowledge. This book for exercise in the art of reading, and in grammar, must be compiled with simplicity and precision, have variety and interest, and be so arranged that after the reading of each page or each article, children may be questioned on what they have just read, that the substance of it may be engraven on the memory. The book is to contain not more than 200 pages small octavo. The author of the book judged worthy of the prize by the Council of the Royal Academy—will receive a medal of the value above named, and the book will be immediately published and used. Medals of the value of 500 francs, will be granted to authors of works which without entirely fulfilling the conditions of the programme, shall be acknowledged to be useful and moral.

THE AGRICULTURIST.

Vermont Agricultural and Horticultural Society.

In compliance with its request, we copy below the official account of the organization of the Vermont Agricultural and Horticultural Society.

The new Society, it will be noticed, differs from the County Societies in this, that it embraces Horticulture as a distinct and prominent object. This was done with a view especially to the cultivation of Fruit. It appeared to be the united opinion of gentlemen present—and many facts were stated in support of it—that Vermont enjoys very great advantages as a fruit-growing State, and that apples and pears, and especially the former, are to be reckoned at no distant period, among our most profitable staples. American apples are in demand in foreign markets to such an extent that there seems to be no danger of over-production. The region which is to supply these apples is quite limited. They must be northern apples, or they will not keep. And the best keepers, other things being equal, are those which are ripened as far north as they can be brought to perfection. It is supposed, therefore, that Vermont apples may be made to rank as high, at least, as any other, in the export trade; and if so, a good market for all the superior winter fruit that we can raise, is certain.

Numerous other subjects connected with Horticulture will of course claim the Society's attention; but in the opinion of many, *this one* would not only justify such an organization, but urgently demands immediate efforts to develop our resources in this respect, and to aid cultivators in the selection and management of their trees, &c. When you plant your corn, an error in the choice of soil or seed, or in the manner of planting or cultivation, will affect only the crop of the year, and you may correct yourself in a twelve-month. Nor in fact does an error there make so much difference. But in regard to an orchard, your income for half a century will materially depend on doing every thing right at the outset.

We presume, therefore, that the new society will make this one of its first objects of attention, and that it will be made to answer, for the State, in some way, the purpose of a convention of fruit-growers that has been recommended, and of a separate organization.

Obviously, however, there are many other subjects that will claim the society's attention, and in regard to which it may be of essential use to the County societies and to the agricultural interests of the State generally.

PROCEEDINGS, &c.

Pursuant to public notice, a convention of the friends of Agricultural and Horticultural improvement convened at the Free Church in Montpelier, Oct. 27, 1847. The meeting was called to order by H. B. Stacy, Esq., of Burlington, and was organized by the election of Hon. William Nash, of New Haven, President; Dr. Charles Clark, of Montpelier, and Hon.

Leonard Sargeant, of Manchester, Vice Presidents, and E. C. Tracy, of Windsor, Secretary.

After remarks by H. Bradley and H. B. Stacy, Esqrs of Burlington, and Rev. S. R. Hall of Craftsbury, on motion of D. W. C. Clarke, Esq. of Burlington,

Voted, That it is expedient to take steps now for the formation of a State Agricultural and Horticultural Society.

On motion of the Rev. S. R. Hall,

Voted, That a committee be appointed to prepare a Constitution for said society.

And such committee was chosen by nomination as follows:

Messrs. S. R. Hall and Isaac Parker, of Orleans county, E. C. Tracy, of Windsor, C. Goodrich, H. B. Stacy, and Francis Wilson, of Chittenden, Daniel Baldwin, of Washington, Geo. B. Chandler and Henry Stevens, of Caledonia, D. Hibbard, of Essex, G. W. Hodges, of Rutland, B. E. Brownell, of Bennington, F. Seymour, of Windham, B. S. Miner, of Lamoille, William Nash, of Addison, David Holbrook, of Orange, L. Mott, of Grand Isle, and L. Brainard, of Franklin.

And said Committee was instructed also to nominate officers of the Society.

Adjourned to Thursday evening, Oct. 28.

On Thursday, Oct. 28, the convention met according to adjournment, when the Committee reported the following constitution:

CONSTITUTION.

ART. I. The name of this Society is "The Vermont Agricultural and Horticultural Society;" its object, to promote improvement in Agriculture, Horticulture, Manufactures, and the Mechanic Arts.

ART. II. Any person may become a member of the Society by paying to the Treasurer, as the By-Laws may direct, one dollar annually; and a member for life by the payment of ten dollars at one time. Persons residing out of the State may be elected Honorary or Corresponding Members by vote of the Society.

ART. III. The officers of this Society shall be a President, who shall be ex-officio chairman of the Executive Committee, a Vice President for each county in the State, a Recording Secretary, a Corresponding Secretary, a Treasurer, an Auditor, an Executive Committee of three; which officers shall hold office for one year and until others are elected.

ART. IV. The annual meeting of the Society shall be held at Montpelier, on the third Thursday in October in each year.

ART. V. The officers of the Society, at any meeting notified by the Corresponding Secretary under the direction of the Executive Committee, shall have power—

1. To enact such By-Laws as may be deemed expedient.

2. To appropriate the funds to the proper objects of the Society.

3. To appoint Committees, and special meetings of the Society.

4. To hold exhibitions, make all necessary arrangements, and award such premiums as they think proper.

5. To take charge of, and distribute, all plants, seeds, books, &c., which may be transmitted to the Society for that purpose.

ART. VI. Under the direction of the Executive Committee, the Publishing Committee shall publish, or co-operate with the State in publishing, annually, the transactions of the Society, returns from the County Societies, or abstracts of them, and such other matters relating to Agriculture, Horticulture, Manufactures, and the Mechanic Arts, as they may deem expedient.

ART. VII. The Executive Committee shall have power to fill all vacancies in the offices of the Society; and persons so appointed shall hold office until the next annual meeting, and until others are elected.

ART. VIII. This Constitution may be amended by a vote of two thirds of the members present, at any annual meeting of the Society.

On motion, the report was accepted, and the above form adopted as the Constitution of the Society.

The Committee reported a list of officers, which was accepted, and the gentlemen named, elected, as follows:

For President,

CHARLES PAINE, of Northfield.

For Vice Presidents,

Leonard Sargeant, of Bennington Co.,
George T. Hodges, of Rutland,
William Nash, of Addison,
L. G. Bingham, of Chittenden,
B. B. Newton, of Franklin,
Samuel Adams, of Grand Isle,
Ariel Hunton, of Lamoille,
Wm. J. Hastings, of Orleans,
Daniel Baldwin, of Washington,
E. B. Chase, of Caledonia,
Reuben C. Benton, of Essex,
A. B. W. Tenney, of Orange,
John Potter, of Windsor,
Frederick Holbrook, of Windham.

Recording Secretary,

E. C. Tracy, of Windsor.

Corresponding Secretary,

Chauncey Goodrich, of Burlington.

Treasurer,

Geo. W. Scott, of Montpelier.

Auditor,

E. P. Jewett, of Montpelier.

Executive Committee,

Harry Bradley, of Burlington,
Francis Wilson, of Hinesburgh,
Geo. W. Collamer, of Barre,
J. W. Howes, of Montpelier.

Publishing Committee,

C. Goodrich, of Burlington,
S. R. Hall, of Craftsbury,
David Reed, of Colchester.

The Society being organized, H. B. Stacy, Esq., laid before it a bill now before the Legislature, pro-

viding for additional encouragement to agriculture, &c.

On motion of P. C. Tucker, Esq., of Vergennes,

Voted, That in the opinion of this Society, the passage of the bill now before the House of Representatives, or some bill similar in principle, would benefit the Agriculture, Horticulture, Manufactures, and Mechanic Arts, in Vermont.

On motion of H. B. Stacy, Esq.,

Voted, as the sense of this Society, That we approve of the project of publishing an agricultural journal in Vermont, and that we recommend to the favorable consideration of our friends throughout the State the 'School Journal and Vermont Agriculturist,' published at Windsor by Messrs. Bishop & Tracy.

Voted, That the proceedings of the Convention and of the Society, including the Constitution and list of officers, be published in the Daily Journal, and in the School Journal and Vermont Agriculturist.

In the course of the proceedings, both of the Convention and of the Society, the meeting was addressed by many gentlemen from different parts of the State, evincing a very deep interest in the object, and exhibiting in a striking light the elements of prosperity that exists in our soil, our position, and our population.

Adjourned.

WILLIAM NASH, President.

E. C. TRACY, Secretary.

THE SPIRIT OF IMPROVEMENT. The Horticulturist for November says: "Our correspondence with all parts of the country informs us, that at no previous time has the improvement of private grounds been so active as at present. . . . New orchards of large extent are rapidly being planted. In short, the horticultural zeal of the country is not only awake—it is brimfull of zeal and activity."

ELMS AS ORNAMENTAL TREES. The maple, so much used in Vermont as an ornamental tree, is beautiful; its dense masses of rich foliage and its fine outline are hardly to be surpassed when contemplated as a single object or in groups. In avenues, too, along streets and walks, the effect is very fine. But are not our villages in danger of neglecting to put the more picturesque elm to its appropriate use? For a wide village street there is nothing in the world equal to it;—"the over-arching boughs," as Downing says, "form an aisle more grand and beautiful than that of any old gothic cathedral." A single old elm is a fine object; but it hardly satisfies the taste to meet with them here and there in a village. The tasteful eye asks to find one long street, at least, overhung by their pendant boughs.

SALT FOR PLUM AND QUINCE TREES. In regard to the use of salt for plum and quince trees, Dr. Lee, editor of the Genesee Farmer, denounces all such specifics as quackery. In the way they are recommended, he says, they are "nostrums." He will be content with nothing less, in the cultivation of any tree, than a careful analysis of the soil and of the tree, and the selection of such food and medicine as each individual case may require.

But pray what are the many thousands to do, who

absolutely cannot avail themselves, at least at present, of this rigid science! Cannot science and experience furnish them with lights, which, if imperfect, will yet be of immense value? May not a scientific man, like Dr. Lee, reduce such recommendations of specifics to the form of rules, near enough to the truth for general use?

Scientific Agriculture.

The exactness with which some farmers are endeavoring to estimate the materials out of which to make a crop, is such as no one thought of a few years ago. We copy the following paragraphs chiefly to illustrate this; for we do not expect our readers just now to go into the use of bones dissolved in acids, and they know what we do not if they can tell what *shoddy* is. The extract, however, is by no means destitute of information that may be of practical value to Vermont farmers. It is from a Lecture lately delivered by Rev. Mr. HUXTABLE, (an English agriculturist, mentioned in our last number,) and since published. The hearers, it seems, paid half a crown each for their tickets, and the printed Lecture was sold at a price equal to the cost of this Journal to most of its readers for a year and a half!

EXTRACT FROM MR. HUXTABLE'S LECTURE.

"By what process of cultivation, when we manure highly for wheat, the straw can be so much stiffened as to bear the increased weight of ear, is at present, in my humble judgment, one of the great problems in agriculture that presses for solution; as it is well known that this stiffness arises from the presence of the silicate potash (an imperfect sort of glass,) chemists have suggested that this soluble silicate, or that of soda, should be added to the ammoniacal manures which we use for wheat: but these salts are expensive; nor am I aware of any experiments having been made which would justify our incurring the outlay for them. Moreover, some interesting facts mentioned by Professor Johnston (*Journal of Agriculture*, p. 103, 1845) shew that there is already abundant silica in our cultivated soils, and that plants are able to decompose and extract silica for their use, even from the most stubborn silicates. If there be alkali enough at hand, the vital forces of the smallest living plant will form the silicate it needs—a process which man accomplishes only by the blast of the hottest furnace. I think, therefore, that in seeking to remedy weakness of straw, we should rather try to diminish that rankness of vegetation in our corn crops, which causes that weakness; and this I think we can accomplish by a simple application. I think there is one cheap and effectual remedy: it is common salt. This will make the straw heavier and stiffer, and correct the tendency of the ammonia, in the manure, to produce a rank vegetation. Mr. Prideaux, of Plymouth, informs me that wheat grown very near the sea stands up better than that grown inland. Mr. Hannam testifies to the increased weight of the straw. Mr. Gardiner (*Highland Transactions*, p. 239, 1844) states, '3 cwt. of salt per acre, thrown over wheat in May, produced no change of color, but improved the tiller-

ing of the plants, which had small stiff, shining, wiry straw.'

"Bones digested in sulphuric or muriatic acid have the same tendency to check rank vegetation and to strengthen the straw; see Mr. Gardiner's *Experiment*, p. 242; also an experiment of Mr. Fleming (*Johnston's Lectures*. Appendix, p. 38,) who dissolved his bones in muriatic acid, and applied the mixture to oats sown upon moss: he says that the straw appeared as stiff and shining as if it had been grown upon stiff loam.

"I think, then, that a perfect top dressing for the wheat crop, on light lands, should be composed of 2 cwt. of bones, well digested in 1 cwt. of sulphuric acid, 5 cwt. of shoddy, and 3 cwt. of salt; thus, in good years you might, I believe, grow six quarters [48 bushels] of wheat per acre. On all light soils this assistance to the wheat should be given in the spring; but as in clay the decomposition of the shoddy is so slow, I should apply this manure when I sowed the wheat on my heavy land in the autumn. There is yet another way of growing a heavy crop of wheat on clay: lime the fields in autumn, two or three weeks before sowing; top dress, in the spring with superphosphate of lime, 3 cwt. of salt, mixed with 30 bushels of clay ashes, which have repeatedly been soaked in urine. I am vain enough to believe that this manure, suggested for wheat, will prove valuable, and quite worth the half-crown you paid for your tickets."

The Ayrshire Cow.

We said a few weeks ago, something about the Ayrshire breed of cows, which has been introduced by the State Society under the most approved form, to which the breed has been carried; for the Ayrshire now is a much superior animal to the cows of a dozen or fifteen years ago. It is said by a very competent observer, that the farmers of Ayrshire have such a reputation, that it would be difficult to find their superiors in any part of the kingdom of Great Britain; and he terms them "the excellent farmers." Such is the value of this breed for milk, that some of the large farmers in Ayrshire are in the habit, under what is called in Scotland the *boyming* or milk paying system, of letting the cows to smaller farmers, who pay the owner *ten pounds* (about fifty dollars) a year.—The owner provides for the cow, and incurs all risks. The lessee takes the entire management and care of the cow, and generally gets an ample remuneration, even after paying the ten pounds. This certainly speaks strongly for the character and capacity of the stock.

We have in the county of Hampden, a great variety of the Durham stock. This is undoubtedly a very valuable race, but we think there is no doubt it must yield to the Ayrshire, so far as milk is concerned. It may be stated however that a cross of the Durham with the Ayrshire is regarded where the experiment has been made, as an improvement. Colman says, as the result of his observations in Great Britain, that the first cross is invariably a fine milking animal; this point, he says, may be deemed established.—*Springfield Republican*.

For the Vermont Agriculturist.

The True Economy in Farming.

I am acquainted with two farmers, whom I will call, on account of their respective characters, Mr. Thrifty and Mr. Parsimony. They reside in different parts of the town, but their farms are of about equal value, and equal capacity for improvement. The different plans on which they manage their business, however, has produced very different results. They are both industrious, temperate and frugal; and yet Mr. Parsimony is in straitened circumstances, his buildings bear marks of decay, and his farm has a slovenly appearance; while Mr. Thrifty is getting forehanded, his farm is neatly cultivated, his fences and buildings are in good repair, and every thing about his premises gives evidence of good management. For many years I have marked the course which they have taken, and I think can satisfactorily account for the difference in their present circumstances.

In the first place, Mr. Thrifty is always in the habit of doing what he undertakes, well, and does not undertake more than he can do well. If he tills a piece of land, it must be well manured, well ploughed, well hoed; and though he does not have so large fields of corn or potatoes or wheat as Mr. Parsimony, yet his products are far larger in proportion to the labor employed, and what he raises is of the best quality and brings the highest price, and his land is left in a good condition for the succeeding crop.

In the next place, Mr. Thrifty is very particular in selecting his seed and procuring the best quality and a sufficient quantity; and if any of his neighbors has a better kind than himself, he does not hesitate to purchase. I have never seen his fields half covered with grass for the want of sufficient seed, nor his fields of English grain half covered with weeds instead of the appropriate crop. He carries out the same principle in his stock. He thinks it good policy to lay out \$5, or \$10 for a good buck, from which he can get fifty lambs every year worth two or three shillings a head more when four months old than those from an ordinary buck. All his breeding animals are selected on the same principle; and he saves every year double his extra expense, in the superior character of his young stock, at the same time that the general character of his flocks and his herds is constantly improving. He is very careful also to keep no more stock than he can keep well, and in a thriving condition; at the same time he manages to consume all his fodder on his own farm, so as to save as much manure as possible.

Mr. Parsimony cultivates much more land than Mr. Thrifty, but scarcely a single field bears the mark of good husbandry, and his crops being spread over a great surface, require a great amount of labor, and in the end yield a very scanty product of the poorest kind. He always keeps a largo stock, but pays but very little regard to their quality, or their keeping, if he can only keep life in them; and he often sells stock for one half the price that Mr. Thrifty obtains for animals of the same age. So of his crops;—he sows sparingly and reaps sparingly,—his seed is of a poor quality and his crops of the same character, and

of course will bring but a meagre price. He would as soon think of throwing his money into the fire as expending it for improving the breed of his stock or the quality of his crops. He will buy stock occasionally, but it must be of the *cheapest* kind; and instead of expending his money for improving his farm, he must expend it for buying more land. He is altogether too poor to improve his stock or his land.—Others who are rich, like Mr. Thrifty, can do it, he says, but he cannot afford it.

Again, in the hiring of help there is a striking difference. Mr. Thrifty usually hires one good, stiff hand for seven or eight months, and pays him a good price, and another hand for a month or six weeks in haying, at a dollar a day; and he usually hires the very best help which can be procured. Mr. Parsimony hires three or four of the cheapest hands which he can procure, and usually changes his help several times in the course of the year because they do not accomplish anything. The men that he employs, will eat as much as good hands; and taking into account the expense of wages and board, his help costs him twice as much as Mr. Thrifty's, and he does not get any more on the whole, accomplished.

The same policy is pursued by the two men in other subjects. In regard to schools, Mr. Thrifty takes an active interest in having the one in his district of the right kind. In the first place he used his influence to have a good school-house, as he argued that it was poor economy to be at the expense of hiring and boarding a teacher and then sending him into a room to teach where he could not accomplish more than half as much as he could in a good house. He calculated that one half his wages thus thrown away would in two or three years pay for a new house, and therefore the sooner it was provided the better. In the next place, he would not consent to the employment of a poor teacher. He rightly argued that it was not good economy to hire a cheap teacher; for a good teacher could not be hired for a cheap price, and a good teacher would effect twice as much in the same time as a poor one. Taking into account the expense of boarding fifty scholars, the wood, and all the incidental expenses of the school he argues that the best economy is practised by paying a few dollars more a month for a good teacher than to employ a poor one at low wages. He also keeps his children constantly at school, and supplies them with necessary books without grumbling; and as a consequence, his children are all good scholars, and steady and industrious. Mr. Parsimony takes no interest in schools, except the expense. He grumbles if a teacher is paid over 8, or \$10 a month, or if a dollar is laid out in repairing the school-house. His children are not in the school more than half the time, and he is always too poor to supply them with the necessary books, till the school is half out. If he thinks of the school at all, it is only with reference to the expense; and if he speaks of it, he invariably complains of the expense; and if one were to judge of his feelings from his talk, the inference would be that he heartily wished there was not a school in existence. Now for the results. The children of Mr. Thrifty are as well educated at twelve years old, as are those of Mr. Par-

simony at the age of fifteen, at the same time that the former have acquired habits of steady application, while the latter are unsteady and indolent, and cause their parents much perplexity and uneasiness, and are generally regarded in the neighborhood as bad children.

From the experience of these two farmers I have become fully satisfied that the cheap system is absolutely the dearest, and that the reason why so many of our farmers are cramped in their circumstances and perplexed in their business, is because they practise on the cheap system. ● AGRICOLA.

The Wool Depot at Shoreham.

So far as we can learn, those growers who have sent wool to the Depot under the care of Mr. Blanchard are satisfied with the results. The Middlebury Galaxy says:—

"Mr. Blanchard informs us that all the wool placed in his establishment at Shoreham has been disposed of except 15,000 lbs. of extra, and No. 1. This will be sent to Kinderhook to await further offers. The superintendent states the last sales as follows: No. 5, at 28 cts., No. 4, at 30, No. 3, at 34, No. 2, at 38, No. 1, at 44. Mr. Blanchard we have been credibly informed is willing to pay depositors 50 cents for Extra and Prime No. 1, if they prefer it rather than await further sales at Kinderhook, where from 50 to 55 may be expected. We are by no means disappointed in the happy result of this new method of marketing our great staple. So far every depositor has been punctually paid the avails of his wool. We have not heard a lip of complaint against the superintendent in the transaction of this business. His fairness, prudence, and skill in making sales of the property entrusted to him remains wholly unimpeachable. There is every reason to believe that the highest marketable price has been obtained, and far better than if sold to agents upon an average. In several instances very good prices have been realized independent of the depot. But even those have been materially enhanced by its establishment. Wool agents would have sung the same old tune of "*it is naught says the buyer*" until from 30 to 34 cents would have been the standard for wool which has now been sold from 34 to 40."

The plan, we know, has met with much opposition, as must be the case with any plan calculated to change so entirely the course of business and to take it out of the hands of those who have hitherto been the buyers of most lots. The winter will give those interested, time for inquiring and consideration, and for any new stragglements that may be found expedient,—if any.

LIME WATER FOR HENS. During the last season Mr. Joseph Wilcox of this town, having occasion to administer lime water to a sick horse, left a pail of the preparation in his barn, which remained there for some months, serving as a favorite drink for his Hens. He soon afterwards found that the laying of his Hens was apparently increasing to a considerable extent. Becoming convinced of the importance of the (to him new) discovery, he has during the pres-

ent season kept his hens constantly supplied with lime water, placed in troughs within their convenient access, and the result has been an increase in Eggs of some four fold as compared with previous experience. He is willing to share the benefits of the experiment with his neighbors, if they choose to try it; and hence this publication. The newness of the discovery (though it may not be new to all,) is claimed only as applicable to the mode of imparting the lime in this case—its use in another form for the same purpose having been previously understood by many.—*Wayne Sentinel.*

Transplanting.

Mr. Downing, in the Horticulturist, mentions some experiments showing very conclusively the advantage of cutting away part of the top of a tree at the time of transplanting. We copy the following:—

"In 1846, he planted, in an orchard upon good mellow wheat soil, 180 apple trees. They were received from the nursery in the usual condition—that is, with the roots in fair order—but of course, like all nursery trees, somewhat shortened by the spade in digging.

They were all carefully planted in well prepared holes. Before planting, one half of their number had their tops shortened back, so as to leave only one bud of the previous season's wood. The others were planted in the usual way, with their heads entire.—The season was, on the whole, quite favorable. Of the 90 trees that had their heads pruned at the time of planting, only two died, and they nearly all made fine shoots—many of the latter, eighteen inches long. Of those that were planted with their heads entire, eight died; and though the rest started into healthy foliage, yet some of them lost the ends of their branches, few or none of them made shoots exceeding six inches in length, and not one of them had the deep green and luxuriant appearance at the end of the season, which the other half of the orchard presented.—This, the second year's growth, is scarcely less markedly in favor of the pruned trees. They have now not only larger and finer heads than those left untouched, but their heads are decidedly better shaped, and they are more luxuriant and promising in their general aspect.

The second experiment was tried this spring, on a small orchard of 78 peach trees. The trees were of pretty large size, being three years old from the bud. The site is a warm dry southern slope of a hill. One half of the trees were headed back so much as to reduce their whole heads one half, taking off the better part of two years' growth: the remainder were planted without any reduction of the top.

The season being dryer than the last, the difference is more strongly in favor of the pruned trees than in the first experiment. Only one tree died of the thirty-nine that were so severely headed back, and the remaining thirty-eight have made fine bushy heads of new shoots. Twelve died of the thirty-nine not pruned, and of the remainder many have lost parts or the whole of the upper portion of their branches."

The extent of the pruning must depend on circum-

stances. Where a small tree is removed with its roots entire, but little may be necessary; but in all cases something more should be taken from the top than is lost by the root. When a standing tree is well trimmed, its vital energies are thrown into the branches that are left, and they become more vigorous. When a tree is transplanted it rarely occurs but that more or less of a shock is given to the regular process of its growth. The branches should therefore be cut away, to adapt it to the degree of vegetative power that remains, and if possible to secure a vigorous start,—since much in subsequent years depends on the beginning.

The same journal has an account, by a gentleman in Baltimore, of a large tree transplanted in full foliage, which illustrates the importance of pruning. The tree was likely to die, when it occurred to the proprietor that, as there was evidently some circulation of sap, the difficulty probably consisted in the too large extent of leaf and branch exposed to the action of the atmosphere,—the drain being greater than the enfeebled roots could meet. He took off a large portion of the leaves and branches, and the tree at once resumed its growth.

Indeed that is but another way of securing the end often attained with cuttings and small plants by covering them with glass, or shading them. Invert a tumbler over a half-withered plant, and it will quickly resume its freshness, because the moisture can no longer pass off—the leaves can no longer *overdraw* the roots. As the same thing cannot be done with a transplanted tree, we secure the end by diminishing the amount of its exhalant organs—its branches and leaves.

IMPROVED CATTLE. A gentleman remarked at a late agricultural meeting in England, that his father used to keep his cattle till four years old before they were ready for the butcher; but, by improvement of breed, he was able to get his to market in about half that time,—thus saving some two years' feeding.—Before his cattle were two years and a half old their average weight was 840 pounds,—fed on turnips and straw, with a little bean meal to finish off.

A QUESTION. It is stated by an English cultivator that he finds cows preferable to oxen for work. He formerly bought oxen, and after working them till after proper age, fattened them for beef. Now he buys heifers in preference. They are not so strong, but are more docile, he says, require less keeping, and walk faster. They may do a great deal of work without injury to their dairy qualities; and they are more easily fattened. Is all this true?

BROOM CORN. It is asserted by those who have made ample experiments, that the seed of broom corn possesses the property of fattening sheep more rapidly than that of any other vegetable known. In the Boston Ploughman it is stated in an article on this subject, that Albert Hibbard, Esq., of North Hadley, makes use of all the seed of his broom corn for this purpose—that the animals are remarkably fond of it, and will fatten more rapidly than on Indian corn.—

Hens are also very fond of it, and so are swine, in feeding and fattening which we have found it highly valuable.

Quinces.

Quince-trees are a sort of semi-marine vegetable; that is, they seem to flourish only in the vicinity of sea fogs and salt water. Acting on this view, successful experiments have been made in the raising of Quinces in the interior of this State, by supplying marine substances in aid of their vegetation.

M. P. Walker Esq., of Onondauga, related his method to us as follows:

He propagates the trees by sprouts dis severed from the roots of the parent tree, retaining on the sprout a small piece of the root to sustain its independent vegetation. After the sprouts are set out he throws around their stalks and over their roots, a dressing of oyster shells in their natural state. At several times in the course of each year, he sows fine salt over the leaves of both young and old trees after a shower, or heavy dew is on them. In this way he has succeeded in raising very fine quinces, and in preserving his trees in a healthy condition.

Mr. Walker raises the Apple Quince, which he procured originally from the State of Connecticut.—This has the quality of cooking nearly as soft as apple sauce, and it sells in market for double the price of the common pear quince, which can scarcely be stewed soft at all.

Salt on the leaves of *Peach Trees*, he has found to be deleterious, rather than beneficial.

Quince sauce, made in the proportion of a half pound of sugar to a pound of quinces, is of much pleasanter flavor than when double the proportion of sugar is used, and will keep without fermentation during the winter months.—*Farmer and Mechanic.*

Skill in Farming.

Skill adds more to the profits of farming than hard work. In the article of butter, for instance, the same outlay is required, or nearly the same, to make a hundred pounds of poor butter as would be required to make a hundred pounds of that which is good. But when the two articles are marketed there may be five or six dollars of clear extra profit in the pocket of the skillful dairyman.

The importance of scientific farming is realized by those who have found such benefits as is noted above in nearly every department of their labor. A single practical suggestion from an agricultural journal has often been the means of saving hundreds of dollars to the subscriber. Yet, were newspaper suggestions are not always reliable and a farmer should know enough of agricultural chemistry to see whether any recommendation is consistent with sound principles and what variations in the process may be required by difference of soil and climate, yet, it is too common practice with the readers of agricultural journals to merely skim over some of the brief paragraphs while heavy articles that are necessary expositions of agricultural science are left unread.

Farmers who understand their interest will not only

subscribe for a good agricultural paper but read it thoroughly. For a paper that is not worth reading is certainly not worth paying for.—*id.*

FEEDING DOMESTIC ANIMALS. If one cow daily treads three pounds of hay under foot in the mud, she will waste about a hundred pounds per month; or a herd of twenty cows would waste a ton per month. At this rate, how many times, every ten years, would the quantity wasted pay the expense of making feeding boxes and racks?

WATERING CATTLE.—Many farmers suffer a loss by not providing good and convenient water for their cattle. An animal that is compelled to go half a mile over a slippery road, and chased perhaps by dogs, cannot gain in flesh by the operation. If a cow has to travel twice a day half a mile to water, and return, she travels two miles a day;—or ten cows perform twenty miles of traveling per day, and two thousand miles each winter.

PROGRESS OF MACHINERY IN THE AGRICULTURAL DISTRICTS. The newest application of steam to agricultural purposes that I have seen, is a steam threshing machine, which was set to work in the northern districts of Lincolnshire. It consisted of two parts, the steam engine and the threshing apparatus. Each of these was fixed on a four-wheel carriage, with shafts, so as to be easily moved from place to place. They were connected by means of a strong leather strap, such as is ordinarily used in machinery moved by steam. The threshing apparatus stood by the side of a corn rick, from which it was continually fed by three men, who could scarcely supply it quick enough. There seemed to me to be three axes revolving with great rapidity, to which, of course, would be attached the flails and other needful substitutes for manual labor. The grain was delivered underneath, the chaff flew out from behind, and the straw was ejected in front. I examined a few of the beaten ears, and found the work cleanly and effectually performed.—The straw appeared tumbled, but not broken.

Of the quantity of corn threshed you may judge when I tell you that there were at least ten men kept in constant employ in tending the engine, feeding the threshing apparatus, and removing the grain and the straw. The engineer informed me that there were but two other machines of the same or similar construction in the country, that this was the first manufactured by his employers, that it was then being tried, and that the intention was to charge thirty shillings a day for the use of it. Witnessing its operation, one would say it would thresh all the corn in the country in a very short time.—*Correspondent of the London Record.*

The Markets.

BRIGHTON MARKET. Monday, November 29.

At market, 1550 Beef Cattle, 550 Stores, 6500 Sheep, and 1275 Swine.

PRICES. *Beef Cattle*—Extra, \$6 25; first quality, 5 50 a \$6; second, 4 75 a 5 25; third, \$3 50 a 4 50.

Working Oxen—\$75, 86, 93, and 108.

Cows and Calves—\$22, 25, 33, 37, and 45.

Stores—Yearlings, \$7 a \$10; two years old, \$12 a 20; three years old, \$24 a \$38.

Sheep—Small lots at \$1, 1 33, 1 62, 1 88, a 2 33.

Swine—Lots to peddle at 41 a 50 for Sows, and 51 a 60 for Barrows; a very few small pigs 54 a 61c. At retail, from 54 to 7c.—*Advertiser.*

[*J*] Notice is given that after the first of January, 1848, Thursday will be the market day at Brighton instead of Monday. No market will be held on Monday, Jan. 3. The Thursday markets will commence with Jan. 6.

NEW YORK CATTLE MARKET, Nov. 29.

At market, 1100 Beef Cattle, (500 Southern and remainder from New York), 3600 Sheep and Lambs.

PRICES. *Beef Cattle*—A much smaller number on sale the past week than for three months past, which has had a good influence upon prices—now quoted at \$5 50 to 7 90 per cwt., as in quality. Shippers have been in the market, and taken about 80 head for export to Bermuda. About 150 left over.

Sheep and Lambs—In better request at somewhat improved prices. Sheep brought \$1 25 to 2 75 a 4 75, and Lambs \$1 a 2 25. All sold.—*Journal of Commerce.*

FANEUIL HALL MARKET—Retail Prices.

Beef, whole animal or by the quarter, lb.	5	a	6
Do. retail	6	a	14
Butter, firkin,	15	a	22
Geese, lb.	10	a	12
Turkeys, lb.	10	a	14
Chickens, lb.	12	a	15
Mutton; lb.	3	a	8
Lamb, lb.	4	a	10
Eggs, doz.			25
Lard, northern, lb.	10	a	10 1/2
Do. western,			10
Pork, whole hog,	6 1/2	a	7 1/2
Pigs, roasting,	1 50	a	2 50
Apples, sweet, pk.	37 1/2	a	50
do. sour,	25	a	37
do. dried,			5
Pears, pk.			50
Clover seed, northern, lb.	8 1/2	a	9 1/2
do. southern,	7 1/2	a	8
Flax seed, bush.	1 62	a	1 75
Herdsgrass, bush,	2 62	a	2 75
Red Top, bush.			80
do. south do.	65	a	70
Beans, white, bush,	1 75	a	2 00
Squash, marrow, lb.	2 1/2	a	3
Cabbages, head,	4	a	10
Onions, bush,	62	a	75
Beets, bush.	65	a	75
Potatoes, bush.	100	a	1 20

BOSTON WHOLESALE PRICES. Ashes, Pearl, \$6 75 to \$7 00; Pot, \$5 25 to \$6 50. Beeswax, American, 25 to 30 cts. Coffee, Java, 8 to 10 1/2 cts. Fish, large Cod, per 112 lbs., \$3 62 to \$3 75; small, \$2 37 to \$2 50. Flour, Genesee common, \$6 37. Raisins, Cask, \$6 to \$7; Box, \$1 50. Figs, 5 to 15 cts. Corn, Northern, 88 to 90. Hides, Buenos Ayres, dry, 10 cts. Honey, Cuba, gallon, 50 to 53 cts. Molasses, sweet, 24 to 31 cts. Oil, sperm winter, \$1 18 to \$1 25. Potatoes, 50 to 75 cts. Rice, 3 1/2 to 4 1/2 cts. Salt, Liverpool, hhd., \$1 75 to \$1 87; Turke's Island, \$2 37 to 2 50. Sugar, Havana, white, 8 to 9 cts; brown, 5 to 7; loaf, 9 1/2.

Wool—Prime Saxony Fleeces, wash'd, lb.	45	a	50
American full blood,	40	a	45
do 3-4	35	a	38
do 1-2	31	a	33
do 1-4 and com.	28	a	31
Smyrna, Sheep,	15	a	20
do unwashed,	8	a	13
Bengal	7	a	9
Buenos Ayres, unpicked,	6	a	14
Extra Northern pulled lamb,	38	a	40
Super. do do do	35	a	36
No. 1 do do do	30	a	32
2 do do do	20	a	22
3 do do do	14	a	13

SOWING SEEDS IN AUTUMN. Cobbett, in his "American Gardener" recommends the sowing of several kinds of seed in autumn—such for instance as carrots, beets, onions, parsnips and many other kinds. He remarks in illustration of the truth of his theory that, "the seeds of all plants will remain safe in this way all winter, though the frost penetrate to the depth of three feet below them, except the seeds of such plants as a slight frost will cut down." A writer of some distinction in one of our agricultural exchanges, strenuously advocates the same plan, and remarks that this is the system pursued by Dame Nature who casts all her seeds upon the soil in autumn, and never fails of a crop. Onions we have long practiced sowing in the fall, and the same method is adopted by many—especially by those who wish to have them early for marketing.

Domestic Economy.

BOILING VEGETABLES AND MEATS. In boiling vegetables, they should not be put into the water until it is fully heated, and then there should be no cessation of heat until the cooking is finally done.

But when meats are to be boiled, quite an opposite procedure is to be observed. They require to be put into the water while it is cold; or, in case of fowls, while the water is a little warm: then, instead of rapid boiling, the water should be merely simmered. By this process, the meat is made tender, while by fierce boiling it is hardened and made tough.—*Prairie Farmer.*

There is much due to the suggestion as to the manner of cooking, boiling, broiling, roasting or baking, of both vegetables and meats. Having heard the suggestion that potatoes should be put into boiling, instead of cold water over the fire, while warming the feet in the kitchen at the time of cooking an early breakfast, we saw the water boiling before the man had brought in the potatoes, taken that morning from the ground. The soil of the garden was so rich as to make the potatoes heavy: well cleaned, they were boiled as quick as possible; and within some twenty minutes we were eating them at the breakfast table, bursting from the tender skin, and mealy as the best potatoes raised upon the rich grounds upon our neighboring highlands.—*Farmer's Monthly Visitor.*

TO MAKE GOOD BUTTER IN WINTER. We often hear the complaint that butter made in winter is poor. Ours was so for several seasons. It was very slow in coming, and frothy, white, and sometimes bitter; while butter made from the same kind of milk in the warm season was good. I devised many plans for improvement, such as throwing in salt, warm milk, scalding cream, &c.; but to no purpose. At length I scalded my milk when brought from the cow, afterwards setting it in either a cold or warm place as most convenient. I mean I communicated sufficient heat to my milk to destroy the effect which frosty feed in autumn or dry feed in winter had upon it. Since which time we have made, with fifteen minutes churning, purer, sweeter, and more yellow butter than we ever made in summer—and sometimes from the frozen

cream gradually warmed. And were it not that the increase of manufactures, the pursuit of fashion, and other causes combined, render helping hands in a dairy-room now-a-days very scarce, I should be at the trouble of scalding my milk before setting it during the summer, as well as in winter; for surely, butter made in this way possesses a delicious richness and dryness which cannot be found in any other.—*Cultivator.*

PUDDINGS THAT ARE QUICKLY MADE WITHOUT MUCH EXPENSE. Beat up four spoonfuls of flour with a pint of milk and four eggs to a good batter, nutmeg and sugar to your taste; butter teacups, fill them three parts full, and send them to the oven. A quarter of an hour will bake them.

WASHING FLANNEL. If white, it should be done in as hot water as possible, with hard soap.

SHRINKING OF FLANNEL. Enclose new flannel in a bag; put it into a boiler with cold water; heat and boil it. It will never shrink any more after this operation, and should then be made up into garments.

FRAGMENTS OF BREAD may all be saved by making them into toasts and puddings; and they also make good pancakes, by soaking over night in milk, and then adding an egg or two, and a little salt and flour.

PRESERVES. If fermenting, boil them, and add a little powdered salaratus, say size of a pea for a quart or two, but more if much fermented.

FEATHER BEDS should be aired once a week; but do not hang them out of the front windows, unless you wish to add a striking feature in the picturesque expression of your dwelling.

MOTHS. Camphor (not tobacco) will repel moths. Flannels well wrapped in linen, are safe from moths. But they should be first well brushed about the first days of summer, as the moths then begin to increase.

VIALS, WITH MEDICINES, should be kept constantly and very distinctly labelled—it would prevent some fatal accidents.

STRAW BEDS are generally improved by being boxed at the side, or stitched through like mattresses.

SAUSAGES. The best proportions are 3 lbs. salt, 10 oz. sage, 10 oz. pepper, to every 100 lbs. chopped meat.—*Houswife.*

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following
TERMS:

For a single copy, - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " " - -	3 00
16 " " " " " - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

☞ Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

VOL. I.

WINDSOR, VT., JANUARY, 1848.

No. 9.

THE SCHOOL JOURNAL.

For the School Journal.

Manners—or Respect to Parents.

There are many parents in our community who deem the manners of their children of little importance. The respectful "yes, sir," and "no, sir," "yes, ma'am," or "no, ma'am," or "I don't know, sir, or ma'am," is little cared for; and the influence it would exert on the character of the youth of whom it should be required, is quite unheeded.

Hence the frequent difficulty of teachers with their pupils, in the present day. If parents do not require the external tokens of respect from their children, the children will not exhibit respect towards any one.—These outward demonstrations of respect have much to do with the cultivation of right and proper feelings. They operate much as warm and proper clothing does in the cold season; it not only looks comfortable to others, but it warms and rejoices the wearer.

Some seem to be afraid, that the observance of deference to others will destroy independence of mind, make one feel an inferiority. Such know little of human dignity. They mistake *bluntness* and *gruffness* for independence, or perhaps aim to conceal the deficiency of the latter trait, by assuming the former.—"If I do not think well of myself, no body else will," has led many astray; they rendering it by their contrivance, "If I do not make much of myself, nobody else will." The maxim is true enough, simply meaning, that if we are not able to esteem ourselves in our motives of conduct, others cannot esteem us in it.

Let parents then, however plain their circumstances, and humble their estimate of themselves, require as a *matter of course*, a respectful demeanor in their children. Training to this effect should commence early, for habit is everything; but if it has been delayed, defer it no longer.

"We have not required our little ones to say yes, sir, and no, ma'am," &c., said a lady to me, as an apology for the ill-manners of her child; "they have not seemed to like to do it, and it is some trouble you know."—Yes, here is the secret of it in many cases; children do not always like to do it, and it is too much trouble to persevere in securing their obedience.

Would you wish your children honored and respected as years mature upon them? Teach them to honor their parents. They do respect you from their earliest thoughts, for your unvarying kindness to them,

and for your wisdom. Knowing nothing, you are all their world for a few years.

"I could not write large i, and little you," replied a child eight years old, whose first attempt at composition was a letter to her mother, when a substitute of the capital I was suggested for the little one, every where used. When the proprieties of letter-writing were discussed, a young man, a member of college, remarked, I could never do otherwise than commence father and mother with capitals, wherever I write it.

Cherish this precious instinct, and if ever, by rude contact with others, your children seem lightly to regard your wishes, frown upon them till you have convinced them of their error.

The tender assiduity of adults towards infirm and childish parents is beautiful to behold, and oh, how sad the opposite picture! Would you in the decline of life, when the duties which formerly devolved upon you are discharged by others, and the places which knew you, know you no more, and all matters of public interest are conducted as promptly as when you and your contemporaries shared in them, indicating to you, that your individual importance is abated,—when all these things conspire to try your feelings, and lessen your estimate of yourselves, would you enjoy a serene old age, in the midst of your children, and your children's children, cultivate *now* such habits of reverence in your sons and daughters, that they will ever delight to cherish those so near and dear to them.

E. M. W.

Common School Association.

A special meeting of the Caledonia Common School Association was held at St. Johnsbury on the 26th and 27th Nov. The attendance appears not to have been large; but the spirit of improvement was there.

The first discussion was upon the necessary apparatus of a school room; and the second upon the defects of our common schools. Then followed an excellent address by Professor Sanborn of Dartmouth College. Several subjects proposed in the Notice published before the meeting, were also considered; and the views of the Association upon some important topics were embodied in a series of resolutions, as follows:

RESOLUTIONS.

1. *Resolved*, That since the Statute requires of teachers to give instruction in good behavior—and since all education is imperfect which does not embrace suitable training in regard to morals and manners; it is especially incumbent on teachers and pa-

rents to coöperate in efforts to reform the habits and morals of the children in our schools, and to secure a propriety of conduct in their intercourse with each other, and in their deportment towards their superiors and elders.

2. *Resolved*, That the interests of Education, can be effectually promoted only by the employment of Teachers in our Public Schools of a high order of talent, and of suitable qualifications; and that the outlay of money necessary to secure such teachers, is, in the end, the only true economy.

3. *Resolved*, That parents and citizens may efficiently aid in the work of improving our system of education by visiting the schools, by securing the services of competent school committees and school teachers, by providing comfortable and convenient school-houses with suitable furniture, apparatus and books, by making arrangements for the punctual attendance of their children during the term; and in general coöperating with teachers, and manifesting, both to teachers and scholars, a deep interest in the prosperity of common schools.

4. *Resolved*, That by the use of these means, parents and citizens will practice the only true economy and secure the greatest amount of benefit to their children, at the least expense.

5. *Resolved*, That a large Black-board is an indispensable article of school-house furniture, and that Comell's globe, costing \$3, and Mitchell's outline maps, costing \$15, are very desirable, and the advantages attending the use of them would amply pay the expense.

6. *Resolved*, That Teachers may do much to enlist the coöperation of parents and awaken an interest on their part in schools; and also secure a more punctual attendance on the part of scholars, and a greater interest and attention to their studies, by frequently visiting the families of the district in which they teach.

7. *Resolved*, That in view of the unnecessary expense attending a frequent change of books, and the many serious evils connected with a diversity in the same school, we deem it important that Teachers use their influence to introduce those which have been recommended for use in the county.

8. *Resolved*, That the improvement of our schools is a great and good work, one in which the interests of the whole community are involved, and that we will never yield to discouragements in our efforts to promote it.

9. *Resolved*, That we regard the Vermont School Journal as a valuable auxiliary in the work of promoting common school education, and that Teachers and others will do a good work by promoting its circulation.

10. *Resolved*, That the cause of common school education demands not only the countenance, but the active coöperation of those citizens of our State, who by their talents and station exert a commanding influence over public sentiment.

11. *Resolved*, That Mr. James K. Colby, Rev. Rufus Case and Rev. David Perry, be requested to act as a Committee to correspond with persons in other parts of the State friendly to this cause, in regard

to the expediency of calling a State Educational Convention, at some time during the next summer; and if deemed expedient, there to coöperate with such persons, in making arrangements for holding such Convention and for suitable exercises, and for securing such assistance in the exercises of the meeting as they may judge desirable.

12. *Resolved*, That one of the greatest hindrances to the best influences of our system of common schools is badly located, badly constructed, and badly ventilated school-houses; and that a regard to economy and the progress of our children in morality and intellectual training, demand the immediate attention of districts, with a view to the removal of these evils.

13. *Resolved*, That we recommend to those who are about to build new school-houses, to be at some pains to obtain good models.

Our Next Volume.

This Journal has now been before the public two-thirds of a year,—a time sufficient to enable the friends of the enterprise to judge whether it is desirable or feasible to have it become permanent. It was commenced, as we have before stated, by the desire of several gentlemen deeply interested in the improvement of our Common Schools and of our agriculture. One of these gentlemen undertook to supply three Counties with the Journal, and in other ways to sustain the enterprise. Whether he will be disposed to the same another year, we do not know. We, however, think that the friends of improvement ought not to ask it, and that the time has come for calling attention *distinctly* to the question *what they* are willing to do in the premises. Three numbers more conclude the volume; and *before* these three months shall expire, it will be necessary for us to know what is to be done, and to make arrangements accordingly. We wish, therefore, that *all, in each County*, who judge that it is important to have the work continued, and generally read, would, *without delay*, consult together, and let us know *distinctly* their views. If they deem it important to the cause of education and to other interests, to have it continued, *let them say this, and also what may be relied upon* to be done in their County. We hope that *all* interested in the objects to which the Journal is devoted, will feel that they have an interest in giving us the answer we ask. If they cannot consult with others in their County, let them inform us what will be done in *their* town.

Our own view is, that the work may be most thoroughly done by associated County action. Let the friends of education and agricultural improvement in each County confer together. If they deem it important to have the work continued, let them take the necessary measures to circulate it in every town. A few individuals in each County, who know the ground and the men who take an interest in such matters, will do, at no expense, far more than we can by agents.

We have sent agents into several counties to introduce the work; but at an expense that we cannot undertake, every year, if we could find the men.

We mention the subject thus early, that gentlemen interested may look about them in these months of comparative leisure, and enable themselves to inform us at an early day what we may expect, and what we have to do. It will be remembered that unless we receive seasonable orders for another volume we must of course stop, as we send out no numbers on credit.

We do not say this in the spirit of disappointment. Our present circulation is as large, probably, as it was reasonable to expect,—large enough to pay expenses (except for the editor's work); and is in fact far greater, we believe, than any other journal in Vermont has ever obtained. And still there are whole counties and large parts of others where it is hardly known, but in which, for any thing that we know, a circulation as large as any where may be secured.

Notice.

The Superintendent of Common Schools for Orange County, proposes, as far as practicable during the winter, to visit the various schools, and to meet and address the friends and patrons of them and the people generally in the several towns, at 6 o'clock in the evening as follows, viz:—

Fairlee,	Dec.	23d	and 24th,
Vershire,	"	28th	" 29th,
Corinth,	"	30th	" 31st,
Topsham,	Jan'y	4th	" 5th,
Orange,	"	6th	" 7th,
Chelsea,	"	11th	" 12th,
Washington,	"	13th	" 14th,
Tunbridge,	"	18th	" 19th,
Randolph,	"	20th	" 21st,
Braintree,	"	24th	" 25th,
Brookfield,	"	26th	" 27th,
Williamstown,	"	28th	" 31st,
Bradford,	Feb'y	7th	" 8th,
Newbury,	"	9th	" 10th.

The town Superintendents, or in case there are none, the Clergymen, are respectfully requested to fix upon the most suitable places in each town for the lectures and see that the proper notices are given. The propriety of meeting generally in the school houses is suggested. A small house and a modest man best agree.

Believing, as he does, that the subject of Common Schools is one of paramount importance, the Superintendent is earnestly desirous of meeting the people of the County generally and discussing with them freely and frankly some of "the ways and means" by which these schools may be improved.

These schools cost a good deal, and the people ought to receive for the money expended a hundred cents for a dollar. Moreover, the influence of these schools, for good or for evil, is permanent and powerful. It reaches the masses—the millions of the people. It extends to every cottage and is felt around every fire-side in the State. It is the duty of every good citizen to see that this influence is salutary, and that these schools are fully accomplishing the high purposes for which they were designed.

Other States are waking up to the importance of this great subject. The people are beginning to understand and feel more fully than ever, that this sub-

ject deeply concerns them. Vermont will not be behindhand in this good cause.

The Superintendent regards the interest manifested and the welcome he has received in the few towns which he has visited, as a highly favorable indication:—and he earnestly hopes that ere long this State in general, and this County in particular, will stand, where they should stand, first and foremost in zeal, interest and effort to promote the improvement of popular Common School Education.

ROGER S. HOWARD, Superintendent

of Com. Schools for Orange Co.

Thetford, Dec. 16, 1847.

Teachers' Convention.

In conformity with a desire frequently expressed by friends of Common Schools, a Convention is hereby appointed to meet in *Felchville*, on *Thursday the 20th inst., at 10 o'clock, A. M.* It is earnestly desired that all the Teachers, especially in the central and southern part of the County, be present, so far as possible. Town Superintendents, Prudential Committees and others, are earnestly solicited to use their best endeavors to secure a full and punctual attendance of the Teachers in their several schools. Lectures will be given in the morning and afternoon, by gentlemen whose names will be announced in due time. Entertainment will be provided for teachers and other members of the Convention, by the citizens, free of charge.

DARIUS FORBES,

County Supt. of Windsor County.

Chester, Jan. 1, 1848.

All papers circulated in the County are requested to give the above one or more insertions.

CONVENTIONS IN RUTLAND COUNTY. The County Superintendent has published a Notice of Teachers' Conventions to be held this winter in Brandon, Poultney, and Rutland. The first is to be at Brandon.—For particulars, see *Vermont Chronicle*, and the County papers.

GEOMETRY. The Hudson Observer says truly: "If the students of Euclid failed somewhat of gaining a complete apprehension of the modern science of Geometry, those of Legendre, fail more in the proper mental discipline and culture which the first secured."

We have never been satisfied with the substitution, in our schools and colleges, of Legendre for Euclid. The Observer states that Professor Loomis, in his Geometry, just published, has endeavored "to combine the excellencies of Euclid and Legendre—the full stately demonstrations of the former with the scientific method and completeness of the latter."

Arithmetical Question.

Saltpetre and sulphur are mixed together in a mass of 80 lbs., and in such a proportion that for every seven parts of saltpetre, there are three parts of sulphur.—How much saltpetre must be added to the mass, so that the proportion of these substances may be such, that for every eleven parts of saltpetre there may be four parts of sulphur? P.

Classification of Scholars.

In large villages and other populous neighborhoods, there are peculiar advantages for classifying school children, and by that means diminishing the expense and improving the character of the schools at the same time. The younger children can be put under female teachers summer and winter, while a master's school may be kept up through the year for the advanced classes. This arrangement ought to be secured wherever practicable. Our laws provide for the union of contiguous districts for the purpose. Two, three or four districts, embracing not too large a territory, may unite to support one central master's school through the year, in which the course of study may be extended at the pleasure of the districts; while each has its school or schools for the small children, summer and winter.

A correspondent of the *N. Y. Evangelist* gives an account of a meeting of teachers at Norwich, Conn., at which the following instructive account was given of the schools in Cambridge, Mass. The speaker said:—

"The system which had been adopted there had grown out of their own necessities and experience, rather than any preconceived theory, or a determination to do just as somebody else had done. The classification and division of schools had been formed with sole reference to economy and efficiency. The town was divided into three wards. In each ward there were five classes of schools, called Alphabet, Primary, Middle, Grammar and High Schools. Scattered over the wards, wherever the convenience of the neighborhood requires and rooms can be found to hold them, were the Alphabet schools, where children are taken in at the age of five years, and taught the letters, and easy readings and spellings of two syllables. Until last year, they were received at four years old, but the crowded state of the schools led the committee to limit the age to five years.

From the Alphabet school they are advanced to the Primary, in which they continue until they can read fluently in easy lessons, and have learned punctuation, numbers, and the multiplication table. Then they are put forward to the Middle school, which is believed to be peculiar to Cambridge. All these schools are taught exclusively by *females*, both because they cost less, and are better qualified than men to teach little children. The wages of these female teachers are \$300 to \$350 a year, being more than \$4 to \$5 per week for the time they are engaged in teaching. In the Middle schools the children advance in reading and spelling, learn some elementary portions of geography, and master Colburn's Arithmetic to sec. 19.

The Alphabet, Primary and Middle schools are 22 in number, and contain 1333 children. The average number of scholars in these schools is about 70. The average attendance is about one-fifth less.

There are six Grammar schools, each of which is under a male teacher, at a salary of \$650 to \$750 per annum. These teachers are educated men, who make teaching their profession. In most of these schools a female assistant is employed. The average number of scholars is 100.

For some years past, there has been a High school in each ward, where the higher branches of English education were taught, and boys were fitted for college. The teachers of these schools were paid \$800 a year. This year it has been resolved that there shall be but one High school, and the gentleman who taught with so much success in the High school at Worcester, has been obtained to take charge of it, at a salary of \$1100.

The annual expenses of the public schools are about \$15,000. The number of children in the city, between 4 and 16 years of age, is 3015. The average expense paid by the town as a tax, is five dollars for each scholar. Of \$40,000 which the people raise yearly by tax, the schools take three-eighths. The amount raised by tax for support of schools is more than one dollar to each inhabitant.

The success of this system is seen in the fact, that in a town where only one-eighth of the children from 4 to 16 attend no school, a town which had 90 scholars in Harvard College, a town filled with wealthy and educated citizens, who would spare no reasonable expense in the education of their children, less than one-tenth of the children are sent to private schools, including the Hopkins endowed school, female seminaries, and several little neighborhood schools for young children. Indeed, it may be said that private schools have been completely run out by the excellence of the public schools, distancing all competition.

This state of things has not been brought about by raising a public odium against private schools, but by raising the character and improving the accommodations of the public schools. And that has been achieved by dint of faithful and wise efforts, persevered in through a series of years. Many years ago, some public-spirited citizens became convinced that the true interest of a republic required that all the children should be educated alike as far as possible. They, therefore, set themselves to elevate the public schools. And this they have done, mainly by first going into the schools themselves, spending much time in visiting the schools, stimulating and encouraging the scholars, advising and aiding the teachers, giving out questions, superintending experiments, &c. In this way the children became engaged, so as absolutely to require more competent teachers. The want was created among the children first. And some of these experienced committee men have said that there was no one class of exercises which they found so beneficial in stimulating the minds of the children, and elevating the intellectual character of schools, as the pains they used to take in helping and encouraging *good reading*."

ATTAINMENT OF KNOWLEDGE. Dr. Olinthus Gregory says: "With a few exceptions (so few, indeed, that they need scarcely be taken into a practical estimate), *any person may learn any thing upon which he sets his heart*. To insure success, he has simply so to discipline his mind as to check its vagrancies, to cure it of its constant proneness to be doing two or more things at a time, and to compel it to direct its combined energies simultaneously to a single object, and thus to do *one thing at once*. This I consider as

one of the most difficult, but one of the most useful lessons that a young man can learn."

From the *Annals of Education*, Vol. IV.

What Every Teacher can do.

1. Every one who engages in school keeping, can open his school precisely at the appointed hour. There is no one thing, which, at first view, appears to promise so little, that will ultimately accomplish so much good, as this. I have seen an indifferent teacher inspire his pupils, and many of their parents, with confidence, and effect a thorough reformation in this respect, by commencing his exercises every morning at exactly nine o'clock, the time appointed, and persevering in this practice. I have known him to dispense with his usual meal, when the lateness of the hour was likely to prevent his being at the school room in due season.

2. It is in the power of every teacher to have the school room comfortable every morning, in regard to temperature. There is so much of suffering in school, from late, or inefficient, or smoking fires, that this is a point of more importance than many are accustomed to suppose. The work of heating a school room does not properly belong to a teacher; and it is a most mistaken economy which leads his employers to suffer him to perform it, when those whose time is worth far less than his, could do it just as well. Still if effectual measures are not taken by others, it is best for the teacher to see the work done, or do it himself. There are *instructors* who have made their morning fires for six months together, and always with great advantage, both to themselves and their pupils. Every teacher can do this,—I mean if he is furnished with a sufficient quantity of good fuel; and if not, he ought to relinquish his employment.

3. All teachers have it in their power to welcome their pupils to the school room when they arrive, and to see that they are provided with seats, books, &c., if they *have* them. It is true that such marks of attention and interest will consume time; but is that time misemployed which is spent in measures calculated to promote the happiness of a school, and impart to it a tone of good feeling which is not likely to be wholly lost during the day!

4. Every teacher has it in his power to consult the health and comfort of his pupils while they remain with him. If the air is bad in the school room, he can ventilate the room by means of doors or windows. If the temperature is too high or too low, he can regulate it. If the pupils are tired of sitting, he can let them stand, or walk out; either single, or by classes. If they are thirsty, he can furnish them with drink, without exposing their health by suffering them to pour down large quantities of water when greatly heated with exercise.

5. Every teacher can make constant and unremitting effort so to gain the affection and confidence of his pupils that he can control them, properly, without violence. He can labor hard to govern by persuasion, rather than force; by kindness, rather than severity; and by love, rather than fear. But when all other measures fail, with certain individuals who have never

been accustomed to restraint without violence—and such cases may occur in very large schools—every teacher can, as a last resort, use severity.

6. Every instructor can and should see that what he teaches, is taught thoroughly. If a school consists of eighty or an hundred pupils, the time which, in three hours, can be appropriated to an individual, is, of course, very trifling, and unless what is done for an individual be thoroughly done, he will derive little benefit from attending, except in so far as he learns from hearing others. But even here, *thorough* teaching is equally indispensable; for the more he learns from imitation, the greater the necessity that the example he imitates, should be excellent.

7. Every one who has the care of the young, can strive to furnish them with constant employment.—This is so indispensable, that when we have once considered the matter, we wonder why any teacher should ever have been so unreasonable as to require children to sit like statues an hour, or two hours, at a time; and why the latter should not have rebelled against such tyranny, much oftener than they have.

8. It is, also, within the power of every one to try to make children interested in what they learn. He has not the first qualification of a teacher, who supposes the child to be benefitted to the utmost, when he is wholly passive in the work of education, like a vessel which merely receives and contains what is put into it. It is as necessary that the mental palate should be gratified, as the physical.

9. He who takes a school, should remember that he is not only responsible to those who are committed to his charge, and to their parents, but to God. He should, therefore, devote himself wholly to the business; attending to nothing else, except so far as may be necessary, in order to preserve his health. His school is to have a place among his first thoughts in the morning, and his last in the evening, as well as those of every hour between. If a teacher cannot afford to teach thus, then let him betake himself, at once, to some other employment.

10. Every teacher, whatever may be his religious opinions or creed, and whatever may be the difficulty of inculcating religion, or even morality in his school by precept, can set a pure and spotless example before his pupils.

Self-control in a Child.

At one of the private schools, where there is an interesting group of little girls, whose teacher diffuses a spiritual influence through all that she does, it is her custom, at the close of the quarter, and especially on the last day of the year, to tell each scholar what she considers her particular failing; and what she hopes each one will strive to amend during the year. These are always occasions of interest, and she has found them to be productive of good. In this school, was a little girl about eight years old. She was a child of great natural ability, kind-hearted, and of great strength of purpose; but she had no control over her feelings. Naturally of a nervous temperament, the least thing excited her, and caused her to fall into the most violent passions. She would stamp

with anger, and, for a time, appear unconscious of what she said or did. On the last day of December, as the teacher in turn addressed each scholar, "Oh, what good things," said she to her, "I should hope of you, if you did not yield so to your feelings. How I wish that before the close of another quarter, you may have learned to control your temper, for this destroys your own happiness, and that of those around you."

She made no reply; but seemed deeply affected. The next morning, it being New Year's day, many of the scholars came running in with some little offering of affection. This little girl stood looking at them for a moment, and then throwing her arms around her teacher's neck, she whispered, "I have no present to give you, but I bring something which I know you will like as well." "And what is that?" said the teacher. "A firm resolution to govern my temper," was the reply; "and I know I shall succeed, for I am not trying in my own strength, I have asked God to help me."

From that day, until the close of the quarter, not once did that child give way to her temper; and, although the blood would often rush to her cheek, and the tear start to her eye, yet she resolutely controlled every expression of passion.—*Waterston's Lecture.*

For the School Journal.

Notes by the Way.

It has appeared to me in visiting schools somewhat extensively, in a certain section of our State, that if their *real condition* could be exhibited before the people, the most effectual step would be taken towards their improvement. Remedies are not sought, when no disease is felt; efficient measures are never adopted for the removal of evils, till it is seen that evils exist which *need* to be removed. I cannot believe the people of Vermont are more inclined to neglect their vital interests, or more slow to act, when action is required, than those of other states around her; and they would be as ready to admit that the education of the people is *indispensable*, absolutely *essential* to the security of her best interests. And they would be among the very *last* to dispense with their common schools. The reason they are not better, and that more efficient means are not adopted to improve them, is not so much that they are undervalued, as because their *real condition* is not well understood,—their *need of improvement*.

If the people generally could pass around and visit successively all the schools in their region, and see for themselves the *wide difference*, the *striking contrast* between them, in regard to *every thing* which pertains to a school, they would surely be aroused, and take speedy and effective measures for their improvement; at least give countenance and support to those already adopted.

As this cannot be done, it is desirable that in other ways their actual condition, so far as possible, be spread out before them. I have visited a large number of schools, and have been in the habit of taking notes, while in the school-room, by which I could af-

terwards recall their actual condition. With your permission, I will copy from my memoranda, some of those notes, in the same broken manner in which they were taken. Those given will be a fair sample of the whole.

Dec. 17. Visited Mr. —'s school. 45 present. House comfortable, but badly arranged; seats on opposite sides, scholars sit facing. A fine class in Colburn's Lessons, comprising most of the large scholars, well taught and evidently deriving *profit*. School orderly and well arranged. Good degree of uniformity in Books. *Good school.*

P. M. Visited Mr. —'s school. 23 present.—House very inconvenient, seats on three sides, door in one corner, stove in the centre. Good stove, shovel, and dry wood. School orderly, classes come out still, and stand with folded hands. Younger scholars well trained in spelling book, first class deficient in ditto. Good class in Colburn.

18. Visited Miss —'s school. Miserable house, too small by half, square, and seats on four sides, stove in the middle; no shovel, pail, or cup. School very noisy, and idle, and poorly taught. *Say* their lessons, memoriter, except what is said, or rather *read* to them by Teacher, which is a large portion.—No waking up of the mind.

P. M. Mr. —'s school. Comfortable house, and tolerably well arranged. Good stove, shovel, pail and cup. Scholars *understand* what they go over. Learn spelling book. Still and orderly.

Mr. —'s school. 26 present. House badly arranged, seats on three sides. Open stove, no shovel or tongs. Very contracted blackboard, and little used. Want of system and thoroughness. Great variety of books. Morse's, Mitchell's, Olney's, and Parley's Geography. Wells's and Smith's Grammar. Boys 11 years study nothing. Master's copies badly spelled, and grammar as bad.

Miss —'s school. 25 present. Very bad house, ventilated above, and beneath, and around. Very warm about stove, very cold back. School well regulated, and governed,—*instructed* in reading. Write and define words,—a number given out by scholars in rotation daily, to be defined next day. Exercises in composition. Uniformity of books,—well classified. With good house, would be a first rate school.

Mr. —'s school. *Bad house*,—door off the hinges, plastering off, no shovel or tongs. School very noisy, whisper and ask great many questions. Small scholars *often* walk out, holding up the book, with the finger on a word. Want of system. No fixed time for lessons,—recite as they are ready, and often *before* they are ready. Diversity of books. Boys 12 years of age, no study, but reading and spelling, and don't *study* these. Say *no* and *yes* to teacher. Not instructed in *manner* or *morals*.

Mr. —'s school. Bad house, but *kept neat*. No shovel or tongs, pail or cup. Step up 12 inches from one tier of seats to the next. Learn sounds of letters. Five kinds of geography used. Teacher's time so divided, can't do much in way of *instructing*.

Mr. —'s school. 32 present. Bad house—no entry, seats face, house extremely dirty, scholars *very*

noisy, constant whispering. Bad readers, and no instruction in reading or scarcely in any thing. Scholars 12 years of age don't know pauses, and older ones ignorant of abbreviations, use of capital letters, sounds of letters, &c. Peel beech-nuts in school. Study Geography of Heavens and Philosophy, know nothing of either, except a very few facts. Those in higher branches know nothing of History, and very little of Geography, or even the spelling book. Black board 2 feet 8 inches by 2 feet.

Mr. —'s school. 37 present. Miserable house—seats on 4 sides. Master's coat off, and house intolerably warm,—scholars cough badly. Five kinds of geography and 4 of arithmetic. Class 10 years of age read in 3d class Reader, and spell little words of one syllable,—know very little of spelling book. No pail or cup. Black board 1½ by 2½ feet.

Miss —'s school. Miserable house, seats face, and only 5 feet space between, for stove, &c. Step up 1 foot from one to another. No shed, pail or cup, shovel or tongs. Scholars noisy, whisper a great deal, and study loud. *Many side*. Boys 12 years do n't know abbreviations or pauses, study nothing. Girls 10 years, no book whatever, read words of one syllable. At recess tall girls slide down hill in street on sleds in the same style as boys.

Mr. —'s school. 35 present. 16 study Morse's Geography,—large class in Adams's Arithmetic and in Colburn. 30 write twice a week. Well classified and arranged. One class in Philosophy and one in Algebra, and *well taught in all*. School still, *no whispering*, orderly, and systematic. Learn sounds of letters. Profitable school.

Mr. —'s school. Walls not plastered, ceiled and covered with grotesque images in chalk and coal,—rough boards overhead, no shovel, tongs, pail or cup,—floor inclined and dangerous walking, seats on three sides. Green wood at door, and some black, which boys chop at recess. Only 4 study geography and in 4 classes. Three in philosophy who ought to be in spelling book. No class in arithmetic—study it at random, because master has n't time as he says to hear a class recite, so he shows them how to "*do sums*," one at a time!

Mr. —'s school: Miserable house, and school ditto. Master indolent and ignorant. Carries a large stick in his hand, which he occasionally brings down upon the desks with a fearful crash, with, "tend to your books there," or, "stop your noise there, or I'll fix ye," which makes all still for the space of half a minute! 29 scholars and only one in Grammar, and three in three different Geographies. Boys 16 years of age study Peter Parley's Geography, and "ciphering" in Reduction, which is "as far as they ever went." Boys ask, "m' I be dismissed?" Visitor asks Teacher what is the occasion of so many leaving? Teacher. "They have business, of course, or they would n't ask." On inquiry, it appeared there were "shows" to be seen at the village three or four miles away. Visitor asks a class what they had been reading about. Teacher says "such children do n't know much what they read," and so it appeared in that case. Teacher is obliged to search the map over to find places, and spend as much time in hearing a lesson as

ordinary scholars would need in learning it; unless, as seems often the case, they recite at random. Scholars coarse and vulgar,—time wasted, wretched habits forming,—money paid master far worse than *thrown away*.

"Oh would some power the giftie gie us,
To see ourselves as others see us,
It would from many a blunder free us
An' foolish notion."

My object in giving the above is to "hold the mirror up to nature." Perhaps many may see their own school in it, if they will look into it and compare.

On looking over my notes I think those I have given are a *little* worse than the average, especially in regard to schools taught by females; for those on an average were quite as good as those taught by males.

S. E.

That is well done. Let those whose office calls them to visit schools, send us more of the same kind of information.—Eos.

Importance of Supervision.

No one will deny that a vigilant and intelligent supervision of the schools, is as essential to their successful operation, as to that of any branch of industry. Without careful oversight no business can flourish, no enterprise will prosper. This principle is understood and acted on in all the common concerns of life. And if our common schools instead of being nurseries, where five hundred and sixty-two thousand children daily assemble to prepare themselves for usefulness and respectability, was each to be converted into a workshop or manufactory, and the fruits of the labor thus employed be made to constitute the revenues of the State, would not a vigilant and thorough supervision be deemed indispensable to the successful prosecution of the business? And need we urge the comparative value of an income to the State of dollars and cents, and an income of virtuous, intelligent, manly citizens, worthy of the soil they inherit, of the privileges they are to enjoy, defend and transmit to unborn generations? What consummate folly is it then, to appropriate million upon million for the support of our ten thousand schools, to set them in operation under teachers of doubtful qualifications and little experience, to leave them to go on as they best may, in vain reliance on some supposed inherent self regulating principle in the system, and yet expect to receive the full benefits which the expenditure of so much money, the services of so many teachers and the time of so many children ought to confer? The incontestable loss consequent on this vain dependence, we leave to others to estimate; our arithmetic has no rules for calculating the worth of that virtue, intelligence and happiness, which the neglect or perversion of the means of education has already lost to the State.—N. Y. Legislative Report.

Sir Humphrey Davy says that the cause of redness of the sky at sunset, is that the air being then dry, refracts more red or heat-making rays; and as dry air is not perfectly transparent, they are again reflected in the horizon.

The Reward.

BY J. G. WHITTIER.

Who, looking backward from his manhood's prime,
Sees not the specter of his misspent time ;

And, through the shade
Of funeral cypress, planted thick behind,
Hears no reproachful whisper on the wind
From his loved dead !

Who bears no trace of Passion's evil force ?
Who shuns thy sting, O terrible Remorse !
Who would not cast

Half of his Future from him, but to win
Wakeless oblivion for the wrong and sin
Of the sealed Past !

Alas ! the evil, which we fain would shun,
We do, and leave the wished-for good undone ;

Our strength to-day
Is but to-morrow's weakness, prone to fall ;
Poor, blind, unprofitable servants all,
Are we alway.

Yet who, thus looking backward o'er his years,
Feels not his eyelids wet with grateful tears,

If he hath been
Permitted, weak and sinful as he was,
To cheer and aid, in some ennobling cause,
His fellow men ?

If he hath hidden the outcast, or let in
A ray of sunshine to the cell of sin ;

If he hath lent
Strength to the weak, and, in an hour of need,
Over the suffering, mindless of his creed
Or hue, hath bent :

He has not lived in vain ; and, while he gives
The praise to Him in whom he moves and lives,

With thankful heart
He gazes backward, and with hope before,
Knowing that from his works he never more
Can henceforth part. [Our Day.

SIR WALTER SCOTT'S ADVICE TO HIS SON CHARLES.

"I cannot too much impress upon your mind, that labor is the condition, which God has imposed on us, in every station of life. There is nothing worth having, that can be had without it, from the bread which the peasant wins, with the sweat of his brow, to the sports by which the rich man must get rid of his ennui. The only difference betwixt them is, that the poor man labors to get a dinner to his appetite, the rich man to get an appetite to his dinner. As for knowledge, it can no more be planted in the human mind, without labor, than a field of wheat can be produced, without the previous use of the plough. There is, indeed, this great difference, that chance or circumstances may so cause it, that another shall reap what the farmer sows ; but no man can be deprived, whether by accident or misfortune, of the fruits of his own studies ; and the liberal and extended acquisitions of knowledge which he makes, are all for his own use. Labor, my dear boy, therefore, and improve the time. In youth, our steps are light, and

our minds are ductile, and knowledge is easily laid up. But, if we neglect our Spring, our Summers will be useless and contemptible, our harvest will be chaff, and the Winter of our old age, unrespected and desolate."

Again : " Read, my dear Charles, read, and read that which is useful. Man differs from birds and beasts, only because he has the means of availing himself of the knowledge acquired by his predecessors. The swallow builds the same nest which its father and mother built ; and the sparrow does not improve by the experience of its parents. The son of the learned pig, if it had one, would be a mere brute, fit only to make bacon of. It is not so with the human race. Our ancestors lodged in caves and wigwams, where we construct palaces for the rich, and comfortable dwellings for the poor ; and why is this, but because our eye is enabled to look back upon the past, to improve upon our ancestors' improvements, and to avoid their errors ! This can only be done, by studying history, and comparing it with passing events."

A VALUABLE TABLE. The following table compiled from the calculations of J. M. GARNET, Esq., of Virginia, will be found exceedingly valuable to many of our readers :

A box 24 inches by 16 inches square and 22 inches deep, will contain a barrel, or 10,852 cubic inches.

A box 24 inches by 16 inches square and 11 inches deep, will contain half a barrel, or 5,476 cubic inches.

A box 16 inches by 16.8 inches square and 8 inches deep, will contain one bushel, or 2,150.4 cubic inches.

A box 12 inches by 11.2 inches square and 8 inches deep, will contain half a bushel, 1,075 cubic inches.

A box 8 inches by 8.4 inches square and 6 inches deep, will contain one peck, or 537.1 cubic inches.

A box 8 inches by 8 inches square and 4.2 inches deep, will contain one half peck, or 268.8 cubic inches.

A box 7 inches by 4 inches square and 1.8 inches deep, will contain a half gallon, or 131.4 cubic inches.

A box 4 inches by 4 inches square and 4.2 inches deep will contain one quart, or 67.2 cubic inches.

☞ The above is copied from an excellent Agricultural paper, but is wrong in several particulars. Will some of our young arithmeticians send us a corrected copy !—Eds. SCHOOL JOURNAL.

A MAN. The man whom I call deserving the name, is one whose thoughts and exertions are for others rather than himself, whose high purposes are adopted on just principles, and never abandoned while heaven and earth afford means of accomplishing it. He is one who will neither seek an indirect advantage by a specious road, nor take an evil path to secure a real good purpose.—Sir Walter Scott.

"The great comprehensive truths," says J. Q. Adams, "written in letters of living light, on every page of our history, are these : Human happiness has no perfect security but freedom ; freedom none but virtue ; virtue none but knowledge ; and neither freedom or virtue or knowledge, has any vigor or immortal hope, except in the principles of the Christian faith, and in the sanctions of the Christian religion."

THE AGRICULTURIST.

Scientific Agriculture.

The British *Agricultural Gazette* gives an account of a recent social meeting of scientific farmers, held at the mansion of Sir Robert Peel by his invitation. The following extracts will be read with interest and advantage :—

Mr. F. WOODWORTH explained the principles upon which he farmed.

He considered draining to be the foundation of all good husbandry; and he extolled the merits of burnt clay. Some undrained land had come into his occupation, heavy land, which only produced 10½ bushels of wheat per acre: he immediately drained it three feet deep, subsoiled it, dressed it with burnt clay; and the first year obtained from it fifty-one bushels.

The treading of sheep was highly advantageous to the wheat crop, provided the land was thoroughly drained and subsoiled. In order to secure the requisite amount of pressure, he had not only employed sheep, but horses; or even men, who he found could tread down land for 1s. 6d. an acre. He had also found advantage, under some circumstances, in the use of an instrument which he called a peg roller. This was formed of an elm-wood cylinder, studded with oak pegs about four inches apart: it proved to be a most effectual implement when drawn over the land, imitating as it did the consolidating power exercised by the feet of a flock of sheep. He regarded pressing down the land as opposing an invincible obstacle to the operations of grubs and wireworms.

Mr. MECCHI explained the salient points of his practice.

He considered the foundation of agriculture to be the alternation of grain with root crops. He had removed three and a half miles of unnecessary banks and fences. Taking the arable acreage of the United Kingdom, he thought they might safely dispense with 500,000 miles of unnecessary fencing; which, with its timber, displaced much food and labor.

The mechanical appliances of agriculture are rude and costly, and the farm-buildings bad. Wagons are a most unphilosophical contrivance; long, low, and light two-wheeled carts, are far preferable. Mr. Mocchi strongly enforced the advantage of thin sowing, of consolidation by pressure, and the use of salt; the two latter preventing the development of the wireworm and slug. He salted all his wheats at the rate of four to eight bushels per acre, and was determined to use much more. He knew a gentleman in Northamptonshire whose wheat crops could scarcely ever be kept from going down until he used salt; which had effectually kept it standing. Mr. Mocchi salted the manure in his yards. He found that it sweetened them; he supposed it fixed the ammonia. It was a singular fact, that whilst salt tended to preserve animal substance, it on the contrary rapidly decomposed vegetable matter. It was a cheap alkali of native production, costing only about 20s. to 30s. per ton, whilst all other alkalis were nearly eight times as dear. Bones, with or without acid, are invaluable

for roots and green crops. The waste of liquid parts of the manure constituted a national calamity. It is a great mistake ever to allow water to fall on manure. Water is a very heavy article. A thousand gallons weighed 10,000 pounds, and were expensive to cart. He had heard farmers say, when rain was falling, that they should then litter their yards, and make manure, straw and water, in fact. He found in practice that animals did well on their own excrements, and straw under cover; that they consolidated the mass until it was four feet thick, when it would cut out like a good dung-heap, and be fit to carry on the land. But if rain water were allowed to wash this mass, an injurious effect resulted both to the animal and to the manure. He could not afford to allow his manure to be well washed in the yards by drainage from the buildings, and afterwards to be washed, dried, and mangled by putting it out in heaps, and turning it over. It was a waste of time and of money. He found that his crops grew better with unwashed manure. A farm-yard should be like a railway terminus—covered in, but amply ventilated. There was comfort and profit in keeping every thing dry. It did away with the necessity for water carts and tanks; the liquid portions of the excrements being just sufficient to moisten the straw and burnt earth, or other absorbent material.

Good high farming, said Mr. Mocchi, in conclusion, is by far the most profitable; the starvation principle is a losing game: "If we borrow from the earth, we must repay, or we shall soon find an empty exchequer."

The Rev. Mr. HUXTABLE contributed a few valuable facts.

"In my own parish, five years ago, there being many laborers out of employ, I obtained the consent of my landlord, Mr. Stuart, to break up the whole of the grass lands of a small dairy farm. It consisted of ninety-five acres, ten of which only were then under the plough. When I entered on the occupation, the farm supported fourteen dairy cows, and grew forty-eight bushels of wheat and forty bushels of beans. Now it annually produces 1,600 bushels of wheat, forty head of cattle, cows, yearlings and calves; and 100 sheep are fatted, and eighty pigs; and where three and a half laborers were employed, twelve are now sustained all the year round. But the farm, gentlemen, labors under embarrassment, such a one as I wish you all felt—such an accumulation of manure that, with the fear of laid wheat crops before my eyes, I know not where to place it."

He explained the method employed to prepare the manure from "boarded cattle." "First, the liquid manure flows into large tanks; below them is another, which I call the mixing tank, for in it the manure is diluted with water to any degree which the state of the weather may require; the rule being, that in proportion to the increase of temperature must be the increase of dilution—i. e., the hotter the weather, the weaker should be the manure applied. In order to avoid the expensive and often injurious water cart, I have laid down over the highest part of my farm a main of green elm pipe, of two inches diameter, bored

in the solid wood ; at every 100 yards distance is an upright post, bored in the same manner, with a nozzle ; a forcing pump fixed at the mixing-tank discharges along these pipes, buried two feet in the ground, the fluid with a pressure of forty feet ; of course it rushes up these pierced columns, and will discharge itself with great velocity through the nozzle ; to this I attach first of all forty yards of hose, and therewith water all the grass which I can reach : to the end of this hose another forty yards of hose is attached, and a still larger portion of the surface is irrigated ; and, so on for as many forty yards as are required. When enough has been irrigated at the first upright, the nozzle is plugged, and the fluid is discharged at the next 100 yards distanced column ; and so on. For this application of the hose I am indebted to that most able man, Mr. Edwin Chadwick ; the green elm pipe is my own contrivance. The cost of the prepared canvass hose, which was obtained of Mr. Holland, of Manchester, was 1s. a yard ; the wooden pipes only cost me 1s., and being under ground they will be the most enduring. By an outlay of 30l. I can thus irrigate forty acres of land ; and see how inexpensive, compared with the use of the water-cart and horse, is the application. A lad of fifteen works the forcing-pump ; the attaching the hose and its management require a man and a boy : with these, equivalent to two men, I can easily water two acres a day, at the rate of forty hogsheads per acre of the best manure in the world."

Several other gentlemen delivered speeches : among them Sir Robert Peel ; who was impressive, but brief.

Manure for Fruit Trees.

Mr. Downing in the last number of the *HORTICULTURIST*, has an editorial article on specific manures for apple and pear trees and grape vines. Probably some of our readers may find in the following extract hints at the causes of decay in their orchards, and reasons why the manure and cultivation which they have applied have been so useless. After some introductory remarks, Mr. Downing says :—

"According to Dr. Emmons's analysis, in 100 parts of the ashes of the *sap-wood* of the apple tree, there are three elements that greatly preponderate, as follows : 16 parts *potash*, 17 parts *phosphate of lime*, and 18 parts *lime*. In the *bark* of this tree, there are 4 parts *potash* and 51 parts *lime*.

"100 parts of the ashes of the *sap-wood* of the *pear* tree, show 22 parts of *potash*, 27 parts of *phosphate of lime*, and 12 parts of *lime* ; the *bark* giving 6 parts of *potash*, 6 parts of *phosphate*, and 30 parts of *lime*.

"The analysis of the common wild *grape vine* shows 20 parts of *potash*, 15 parts *phosphate of lime*, and 17 parts *lime* to every 100 parts : the *bark* giving 1 part *potash*, 5 parts *phosphate of lime*, and 39 parts of *lime*.

"Now, no intelligent cultivator can examine these results (which we have given thus in the rough to simplify the matter) without being conscious at a glance, that this large necessity existing in these fruit trees for *potash*, *phosphate of lime*, and *lime*, is not at

all provided for by the common system of manuring orchards. Hence, in certain soils where a part or all of these elements naturally exist, we see both the finest fruit and extraordinary productiveness in the orchards. In other soils, well suited perhaps for many other crops, orchards languish and are found unprofitable.

"More than this, Dr. Emmons has pointed out what is perhaps known to few of our readers, that these inorganic substances form, as it were, the skeleton or bones of all vegetables as they do more tangibly in animals. The bones of animals are lime—in form of phosphate and carbonate—and the frailer network skeleton of trunk, leaves and fibres in plants, is formed of precisely the same substance. The bark, the veins and nerves of the leaves, the skin of fruit, are all formed upon a frame-work of this organized salt of lime, which, in the growth of the plant, is taken up from the soil, and circulates freely to the outer extremities of the tree or plant in all directions.

"As these elements, which we have named as forming so large a part of the ashes of plants, are found in animal manures, the latter are quite sufficient in soils where they are not naturally deficient. But, on the other hand, where the soil is wanting in lime, potash, and phosphate of lime, common manures will not and do not answer the purpose. Experience has abundantly proved the latter position ; and science has at length pointed out the cause of the failure.

"The remedy is simple enough. Lime, potash and bones (which latter abound in the phosphate,) are cheap materials, easily obtained in any part of the country. If they are not at hand, common *wood ashes*, which contains all of them, is an easy substitute, and one which may be used in much larger quantities than it is commonly applied, with the most decided benefit to all fruit trees.

"The more scientific cultivator of fruit will not fail, however, to observe that there is a very marked difference in the proportion of these inorganic matters in the ashes of the trees under our notice. Thus, potash and phosphate of lime enter much more largely into the composition of the *pear* than they do in that of the *apple tree* ; while lime is much more abundant in the *apple* than in the *pear* ; the ashes of the *bark* of the *apple tree* being more than half lime. Potash and lime are also found to be predominant elements of the inorganic structure of the *grape vine*.

"Hence *potash* and *bone dust* will be the principal substances to nourish the structure of the *pear tree* ; *lime*, the principal substance for the *apple* ; and *potash* for the *grape vine* ; though each of the others are also highly essential.

"Since these salts of lime penetrate to the remotest extremities of the tree ; since, indeed, they are the foundation upon which a healthy structure of all the other parts must rest, it appears to us a rational deduction that upon their presence, in sufficient quantity, must depend largely the general healthy condition of the leaves and fruit. Hence, it is not unlikely that certain diseases of fruit, known as the bitter rot in apples, the mildew in grapes, and "cracking" in pears, known and confined to certain districts of the

country, may arise from a deficiency of these inorganic elements in the soil of those districts, (not overlooking sulphate of iron, so marked in its effect on the health of foliage.)"

In confirmation of these theoretical views, the author mentions the practice of Mr. Pell, who has the most productive apple orchard in the country, and who has this year sent several thousand barrels of Newtown pippins to the London market, where, from their superior excellence, they are "as well known as a Bank of England note." The great secret of success in that orchard is the *abundant use of lime*. Also the fact that a cultivator of grapes whose vines were failing, had restored them to plentiful bearing by a heavy dressing of wood ashes, supplying the deficient potash and lime.

According to these views, in most parts of Vermont the principal manure at hand to be used in the renovation of our old orchards is, *ashes*; which contain the necessary lime and potash and some other appropriate ingredients. *Leached* ashes, which retain the lime and some of the potash, would be nearly as good as unleached; in some cases, quite as good. Large trees will be the better for very heavy dressings.

Breeding and Fattening Cattle.

Science means that knowledge, not only of the details of a business or profession which enables one to practice it as an art, but that intimate knowledge of all the reasons upon which each particular proceeding in the art is founded, which will enable us to take advantage of unexpected circumstances, and to originate, when it is desired, new modes of proceeding in particular cases. It is a knowledge of principles instead of details.

The advantages of science in the rearing and fattening of cattle though not much thought of by those who follow the business, are not exceeded by those in any other department of agricultural pursuit. As a proof of this, we find it stated in the *Herd Book*, a work by L. F. Allen, Esq., that in 1701 the average weight of beef cattle at the Smithfield market in London was but 370 lbs. each.

"A select Committee of the House of Commons, in a report printed in 1796, stated that since the year 1732 their neat cattle, on an average had increased in size and weight 25 per cent. This would make the average at that time (1795) 462 pounds. The average age of fatted cattle was formerly about five years. At this last period, the peculiar state of the times in Great Britain, and indeed in all Europe, (for the French revolution had stirred up the political cauldron of nearly all Christendom,) was exciting increased attention to agricultural pursuits; and the spirit of improvement in their herds of neat cattle had spread through England and Scotland to a wide extent; probably no period of time witnessed a more rapid dissemination of valuable material for promoting the increased excellence in this variety of domestic animals, than the thirty years succeeding that period. We are not surprised, therefore, at finding, according to the same authority, the average of the Smithfield cattle in 1830 at 656 pounds each, an increase, in 25 years, of over

40 per cent., an astonishing contrast; and when it is understood that these last were fitted for the market at an average of four years of age, instead of five, and probably with a lessened consumption of one year of forage, and a slightly increased expense of annual preparation for market per head, the additional profitable results are enormous. So much for improvements in England, where their efforts in all branches of agriculture are still advancing with undiminished vigor.

Profits of Fruit Culture.

A correspondent of the Horticulturist mentions the following facts, among others, to show the great profits that may be realized from the culture of fruit:

C. A. Cable of Cleveland, Ohio, has a cherry orchard of 100 trees, 22 years old, the crop of which in 1845 was sold for more than \$1000. Trees 25 feet apart, and well cultivated.

Hill Pennell, near Philadelphia, has 20 apple trees of two early varieties, occupying half an acre of ground. In 1846, the crop was sold for \$225, at 75 cents per bushel. The same gentleman has a Raccoon grape vine (the same variety, we suppose, that is known by that name here, and ripens well,) that has never been trimmed, and produces 75 bushels of grapes yearly, which are sold at \$1.00 per bushel.

James Laws of Philadelphia, has a Washington plum tree, that produces 6 bushels of fruit yearly, worth in market \$10 per bushel.

Jacob Steinmetz of Philadelphia, gathers 10 bushels of fruit in a season from a Blue Gage plum tree, worth \$30.

Hugh Hatch of Camden, N. J., has four Winter Blush apple trees, part of the crop of which in 1846 was sold at the rate of \$140 for the whole, or \$35 per tree.

A fruit-grower at Fishkill Landing, gathered from one tree 15 barrels of Lady apples, which he sold for \$45. Another fruit grower in the same neighborhood has received in one season \$1,200 for his crop of Frost Gage plums,—400 bushels. Another remarks that his plum trees, which are set out about the buildings and take up but little room, pay him more profit than the whole of his valuable farm of 200 acres.

Yet, adds the writer, there is no full supply of any of these fruits in the Philadelphia market.

MANMOTH BOQUET. Fremont, in his journal, mentions that on his return home from California, on the streams in that country, he met with a species of Blue Flowering Lupine, of extraordinary beauty, growing to the height of five feet and covered with spikes of flowers, and filling the air with a light and grateful perfume. On the banks of the San Joaquin, he says he found "fields of the flowering Lupine, which seems to love the neighborhood of water. We here found this beautiful shrub in thickets, some of them 12 feet high. Occasionally three or four plants were clustered together, forming a grand bouquet, about 60 feet in circumference, and ten feet high; the whole summit covered with apikes of flowers, the perfume of which is very sweet and grateful." Digitized by Google

Milking.

Cows, independently of their power to retain their milk in the udder, afford different degrees of pleasure in milking them, even in the quietest mood. Some yield their milk with a copious flow, with the gentlest handling that can be given; others require great exertion to draw the milk from them in streams no larger than threads. The udder of the former will be found to have a soft skin, and teats short; that of the latter will have a thick skin, with long, tough teats. The one feels like velvet, the other no better than untanned leather.

The structure of a cow's udder is remarkable. It consists of 4 glands, disconnected with each other, but all contained within one bag or cellular membrane; and the glands are uniform in structure. Each gland consists of 3 parts, the glandular or secreting part, the tubular or conducting part, and the teat or receptacle or receiving part. The glandular forms by far the largest portion of the udder. It appears to the naked eye composed of a mass of yellowish grains, but under the microscope these grains are found to consist entirely of minute bloodvessels forming a compact plexus. These vessels secrete the milk from the blood. "Thus, then," says the writer, "we perceive that the milk is abstracted from the blood in the glandular part of the udder; the tubes receive and deposit it in the reservoir or receptacle; and the sphincter* at the end of the teat retains it there till it is wanted for use. But we must not be understood to mean that all the milk drawn from the udder at one milking, or meal, as it termed, is contained in the receptacle. The milk, as it is secreted, is conveyed to the receptacle, and when this is full, the larger tubes begin to be filled, and next the smaller ones, until the whole become gorged. When this takes place, the secretion of the milk ceases, and absorption of the thinner or more watery part commences. Now, this absorption takes place more readily in the smaller or more distant tubes, we invariably find that the milk from these, which comes the last into the receptacle, is much thicker and richer than what was first drawn off. This milk has been significantly styled *afterings*; and should this gorged state of the tubes be permitted to continue beyond a certain time, serious mischief will sometimes occur; the milk becomes too thick to flow through the tubes, and soon produces, first irritation, then inflammation, and lastly suppuration, and the function of the gland is materially impaired or altogether destroyed. Hence the great importance of emptying these smaller tubes regularly and thoroughly, not merely to prevent the occurrence of disease, but actually to increase the quantity of milk; for so long as the smaller tubes are kept free, milk is constantly forming; but whenever, as we have already mentioned, they become gorged, the secretion of milk ceases until they are emptied. The cow herself has no power over the sphincter at the end of the teat, so

* The teat does not terminate in a true sphincter, there being no muscle in connection with it. A sphincter acts by the power of four muscles, which are contracted or expanded at will, and close or open the orifice around which they are placed.

as to open it and relieve the overcharged udder; neither has she any power of retaining the milk, collected in the reservoirs when the spasm of the sphincter is overcome." ††

You thus see the necessity of drawing away the last drop of milk at every milking, and the better milker the cow is, this is the more necessary.

Having spoken of the internal structure of the udder, its external form requires attention, because it indicates different properties. Its form should be spheroidal, large, giving an idea of spaciousness; the bag should have a soft, fine skin, and the hind part upward toward the tail be loose and elastic. There should be fine long hairs scattered plentifully over the surface, to keep it warm. The teats should not seem to be contracted or funnel-shaped at the onset with the bag. In the former state, teats are very apt to become corded, or *spindled*, as another phrase expresses it, and in the latter too much milk will constantly be pressing on the lower tubes or receptacle. They should drop naturally from the lower parts of the bag, being neither too short, small, or dumpy, or long, flabby and thick, but perhaps about 3 inches in length, and as thick as just to fill the hand. They should hang as if all the quarters of the udder were equal in size, the front quarters projecting a little forward, and the hind ones a little more dependent. Each quarter should contain about equal quantities of milk, though I have always believed that the hind contain rather the most.

Largely developed *milk-veins*, as the subcutaneous veins along the under part of the abdomen are commonly called, are regarded as a source of milk. This is a popular error; for the milk-vein has no connection with the udder; but "although the subcutaneous or milk-vein has nothing to do with the udder," says Mr. Youatt, "but conveys the blood from the fore part of the chest and sides to the inguinal vein, yet a large milk-vein certainly indicates a strongly developed vascular system—one favorable to secretion generally, and to that of the milk among the rest."—*Book of the Farm*.

† Burton's Practical Essay on Milking.

[† Observations such as these, on the anatomy and functions of the udder, may appear superfluous to some, but not so to him who would desire, for himself or his son, a sort of knowledge which it becomes every man to possess who has leisure to acquire it, and which every farmer should regard as being within the purview of his pursuit and position in society—just as much so as it is benefitting in a scholar to be familiar with history, or a diplomatist with living languages and the laws of nations. There is, in fact, not a word in this section, nor in the work to which it belongs, that should not be made a part of the course of instruction for all youths who are to gain their living and maintain their standing in society by the practice of Husbandry and a knowledge of its principles. This Note would apply almost as well anywhere as here; we only seize the occasion to urge an impression which we believe cannot be too often suggested or too widely acted on, as to the variety of knowledge and of studies that ought to embellish the profession of the practical agriculturist, as well as augment its profits.—ED. FARM. LIB.]

IMPORTANCE OF DEEP TILLAGE. However skillfully and philosophically we may carry on our saving and application of manures; however well we may select

our seed, and choose our seed-time, without deep tillage we can by no means receive the maximum result. Drained land, deeply stirred, and thoroughly pulverized, becomes a kind of regulator of the weather, for itself, it is not soon soaked in wet, and it forms a store house of moisture in dry weather. It is a bad conductor of heat, and is therefore not easily overheated; but on the other hand, it is not so easily cooled, and so keeps up an equal temperature by night and by day, in cloud and in sunshine, in the highest degree favorable to the healthy development of plants.—*Farmer's Herald*.

Uses of Deepening the Soil.

It seems to be supposed, by many who talk about deepening the soil, that the first purpose of it is, to allow the roots of plants to run deep; and by some, that if this is not the object there can hardly be any other. This notion is neither confined to the advocates nor opponents of the doctrine of deep tillage. It is but a little time since several different men have maintained, in our hearing, that it was of no use, to plough or dig deep, because the roots of plants run near the surface of the earth. While we do not subscribe to the conclusion here drawn, we suspect the fact to be as stated, to a far greater extent than many suppose.

Till of late, in giving directions for planting out asparagus roots, the cultivators have required the earth to be trenched to the depth of two feet, and the plants to be set with their roots perpendicular, the lower extremities of them being buried at least 15 inches below the surface; and, lest they should incline to go too deep, the bottom of the trenches must be filled with brick or stone, forming a pavement deep in the soil. The whole of this practice was founded on the idea that the roots of this plant were ever delving downwards to the centre of the earth, and the soil must be stirred and enriched down there, that they may not be out of fodder on their journey.

So of grape vines—a great bed of bones, stones, brick bats, and what not, must be formed; because the roots of vines were always straying downward as much as its top was reaching upward. Of late the discovery has been made that the roots of grape vines do not run deep; but they are ever creeping toward the surface, like those amphibious animals which lie so near the surface of the water that the air can find ready access to their lungs.

Nor could we ever satisfy ourselves that the roots of asparagus have any such predilection for the interior of the globe as some maintain. We always find them near the surface, especially when their bed has been deeply tilled.

If these facts are so, is there any use in tilling so deep, and may we not confine our culture to the surface? By no means. The necessity of deep tillage does not rest on these facts, be they one way or the other.

Some of the more general requisites of a soil are, 1st, a fund of food for the plants it sustains, consisting of those mineral constituents and those organic matters adapted to feed them. 2d, an evenness of

temperature. 3d, such a structure as can be easily permeated by moisture and air. And 4th, such a mechanical density as will allow the easy passage of roots through it, and at the same time hold the roots in their places and afford them their nutriment in sufficient quantities.

The reason for the first of these is readily seen. The second is not so quickly comprehended; but the fact is, that a soil which has not been stirred for a long time becomes a ready conductor of heat. Hence its temperature is affected with every change of atmosphere, with this difference—that the cold below controls it much easier than the heat from above. Frequent alterations of heat and cold, such as are common to the early part of the season, act very injuriously upon growing vegetation. If the soil is so constructed as to maintain an even temperature, it may, to a great extent, counteract the effect of the changes of the atmosphere; but if it is affected by all these changes, it is obvious that vegetation must suffer in proportion. It is within the observation of any one that a soil which is thoroughly and deeply tilled is far better fitted to maintain an even temperature, than one which is only moved to a shallow depth. The third quality is obvious; a deeply tilled soil is moist in a dry time, and comparatively dry in a wet one. The fourth only requires it to be observed that too light a soil is not favorable to the best growth of vegetation. Hence the use of rollers, and pressure applied in various ways to bring the earth into a reasonably compact state after pulverization.

Now it is reasonable to suppose—not only in accordance with facts—that with a deep rich culture, the roots of plants seek the surface of the earth, but that they will sooner seek it in such a soil, than in a poor and shal one. A soil of the first named qualities dries far less at the surface than the latter. Of course roots have less occasion to go downward for moisture. The soil, too, being mellow and easily permeated, food of plants is carried upward with the moisture, instead of obliging the roots to delve downward in seeking it.

We see then that deep culture, so far from resting on the fact of the deep permeation of roots, is supported by the contrary fact.—*Prairie Farmer*.

Encouragement to Young Farmers.

At the Cattle Show in Waldo county, a few days since, we made the acquaintance of an aged and agreeable farmer, William Sibley, Esq., of Freedom, who is now one of the wealthiest farmers in that county, and who raises a large quantity of good table fruit, which he ships to foreign markets. His case furnishes much of encouragement to young farmers in Maine, and we allude to it and give a few incidents in his life for their benefit.

Forty-five years since he made his way by means of spotted trees to his present home, there to make him a farm. His humble house, with a roof of bark, was constructed, and thither he took his wife, to share his burthens and lighten his path-way by her smiles. As he first went through the woods to commence upon his present farm, he was not worth enough to pay

for an axe. He has raised forty-four crops, and since his first crop he has not had in his house a quart of meal or a pound of flour not raised upon his farm.—He has in some seasons raised 500 bushels of corn and large crops of wheat. He made preparations for raising fruit, and has succeeded finely, and is still active in introducing into his acres the choicest varieties of fruits. He has given his children a good literary and a good business education, and they severally reflect high credit upon their parents. His property is now estimated at about twenty thousand dollars.

Mr. Sibley was one of the active contributors to the Fair, exhibited various specimens of fruit, &c., and manifested great interest in all that seemed calculated to advance the noble art to which he has devoted his life. He is a man of active habits and sound health, and is a worthy example of what farmers can do when they unite an active mind with an industrious hand in their pursuit, and where the culture of the soil and of the mind go forward together.

It may be thought that we have trespassed too much upon the personal history of Mr. Sibley, but our excuse must be found in the encouragement which is given to young farmers who are about commencing life as he did. For this purpose we think it well occasionally to point out the successes of those who have gone forward in the thorny path, and from small beginnings, by their industry and skill have accomplished that which is praiseworthy and honorable.—*Bangor Whig.*

Work for the Season.

In every month, ere in aught begun,
 Read over that month what avails to be done;
 So neither this travell may seem to be lost,
 Nor thou to repent of this trifling cost.—*Tusser.*

In our youthful days, one of the books which gave us the greatest pleasure to peruse, was the quaint old poem, called, "Five Hundred Points of Good Husbandry," by Thomas Tusser. A beautiful edition of this work has since graced our library, and although our time is now very much engrossed with an exacting business, yet we occasionally find means to snatch an hour during the long winter evenings, to devote to the perusal of what formerly gave us so much delight. In conning over the lines above quoted, a short time since, it occurred to us that we might profitably ask our readers, the pertinent question of "What avails to be done" during this month, that their "travell" [labor] "may not seem to be lost."

We will suppose your horses, cattle, sheep, and swine daily well fed, housed, and cleaned; that your grain is being prepared for the market; that your wood pile is replenished, and such logs as will be wanted for sawed stuff the coming year are taken during good sledding to the saw mill; that the manure as fast as the heaps accumulate, is carted out to the fields and deposited where it will be needed in spring, and if the weather be open, that peat, swamp muck, the leaves of trees, and all decaying matter around your premises are added in proper quantities to these heaps; that all the tools as time permits are being put in order; that the hemp and flax are broken; that you are giving a look to the orchard and cutting out

all decayed and dead limbs; and if you care for early vegetables and have time to cultivate them, that the hot beds are now in rapid preparation in the garden; that you have settled all your accounts for the past year; that you are kind and generous to your poor neighbors; and finally, that you are at peace with yourself and the world. Then what remains to be done? It is this. As you have time, review the numbers of your last year's agricultural periodical—for no man can be entitled to be called a really good farmer, who does not take one of these cheap and highly useful publications—and note all the hints in it of any value to you, and prepare to carry them into practice during the coming active season. If you have more time than this to give to books, commence some one study closely bearing on your occupation. Of these, there is a great variety. For example, agricultural chemistry; mineralogy; vegetable physiology and botany; arboriculture; mechanics, particularly those branches which are connected with building, and the manufacture of agricultural implements; engineering as it has a bearing on ditching, draining, and fencing; natural history, together with the anatomy and pathology of the domestic animals.

These are such things as the farmer ought to know; and he may acquire a pretty good notion of them all by the time he is forty years old, if he will properly improve his winter evenings. Then the mind and hand would work together, and at so great an advantage as to surprise the world. Whenever any country can show such a race of practical and scientific farmers to work its surface, its agricultural productions will be quadrupled; and with morals to match—for these are pretty sure to go hand in hand with science—the enjoyments and happiness of those thus educated would be multiplied tenfold. Are not these things worth working for? We think so: and hope every tiller of the soil in America will respond to the assertion, and exert himself manfully to carry them into effect.

As sure as the sun shines, that farmer who is the most intelligent, and couples with that intelligence proper application and economy, always makes more of every thing under his control, and reaps a larger annual profit than those who are inferior to him in education. It is truly said, that "time is money;" may we not add with equal truth, that education is also money. If then, there be no higher motive on the part of the tillers of the soil to enlighten their minds and increase their understanding, let them do it solely for their worldly interest.—*Am. Agriculturist.*

MUTTON. The common mistake in the management of mutton in our country is that we *eat it exactly at the wrong time after it is killed*. It should be eaten, as a fried chicken should, immediately after being killed, and, if possible, before the meat has time to get cold; or, if not, then it should be kept a week or more—in the ice-house, if the weather require—until the time is just at hand when the fibre passes the state of toughness which it takes on at first, and reaches that incipient or preliminary point in its progress toward putrefaction when the fibres begin to give way and the meat becomes tender.—*Farmers' Library.*

Economy of Education.

I have met many individuals, who, having failed to obtain any improvement in the means of education in their respective places of residence, have removed to towns whose schools were good, believing the sacrifice of a hundred, or even of several hundred dollars, to be nothing in comparison with the value of the school privileges secured for their children by such removal. Still more frequently, when other circumstances have rendered a change of domicile expedient, has this principle of selection governed in choosing a residence. I doubt not there are towns, where parsimonious considerations relative to schools have obtained the ascendancy, which have actually lost more, in dollars and cents, by a reduction of taxable property and polls, than, in their shortsightedness, they supposed they had gained by their scanty appropriations, besides inflicting a sort of banishment upon some of their most worthy and estimable citizens.

Amongst a people who must gain their subsistence by their labor, what can be so economical, so provident and far-sighted, and even so wise,—in a lawful and laudable, though not in the highest sense of that word,—as to establish, and, with open heart and hand, to endow and sustain the most efficient system of universal education for their children; and, where the material bounties of nature are comparatively narrow and stinted, to explore, in their stead, those exhaustless and illimitable resources of comfort and competency and independence, which lie hidden in the yet dormant powers of the human intellect!—*H. Mann.*

FAT PIGS. The Burlington Free Press gives the following account of the success of E. C. Loomis, Esq. of Burlington, in fattening young Porkers. The statistics are furnished by Mr. Loomis:

1st. 2 Pigs 8 months and 14 days old—		
1 weighed	328 lbs.	
1 "	314 lbs.	
	—642 lbs.	
2d. 2 Pigs 8 months and 5 days old—		
1 weighed	368 lbs.	
1 "	324 lbs.	
	—692 lbs.	
3d. (1847) 2 Pigs 8 months and 1 day old—		
1 weighed	328 lbs.	
1 "	289 lbs.	
	—617 lbs.	

Averaging 325 1-6 lbs. each.

Mr. Loomis got the pigs when they were from 5 to 6 weeks old, and fed them on milk and a little Indian meal until about the 1st of September, then changed the feed to clear meal wet up with water to about the consistency of hasty pudding, which he fed to them four times a day, in quantities no larger, however, than they would eat up clean, giving them *neither water nor slops*, during the whole time. The results recorded above furnish the best testimonials in favor of this feeding.

CORN CROP OF WESTERN NEW YORK. The crop of corn this year was large, much exceeding any former year, probably beyond a precedent; but owing to the extreme wet weather for the past two months, but lit-

tle of it is merchantable. Much of it has moulded, and that which has escaped the mould is not fit for market. Dealers in corn meal find it almost impossible to get a sufficiency of sound corn to supply the city trade.—Corn meal is now selling at six shillings per bushel, which is an advance of about eighteen pence per bushel. In the past four days much of the corn that has not moulded, is injured by the *chit* having turned black, which ruins it for meal. The whole of the crop is said to be seriously if not permanently injured.—*Rochester Daily Advertiser.*

The Markets.

BRIGHTON MARKET, Monday, December 27.

At market, 550 Beef Cattle, 60 Stores, 7500 Sheep, and 160 Swine.

PRICES. *Beef Cattle*—Sales quick at a small advance. We quote extra, \$7; first quality, 625 a \$6 75; second, 5 30 a 6; third, \$4 25 a 5 25.

Working Oxen—Dull. Sales at \$70, 75, 78, and 90.

Cows and Calves—Sales at \$26, 32, and 48.

Sheep—Dull; 2000 unsold. Sales at \$1, 1 12, 1 33, 1 62, 1 81, and \$2.

Swine—Two small lots to peddle at 4½ for Sows, and 5½ for Barrows. At retail, from 5½ to 7c.—*Advertiser.*

NEW YORK CATTLE MARKET, Dec. 27.

At market, 1000 Beef Cattle, 2500 Sheep and Lambs.

PRICES. *Beef Cattle*—With supplies about equal to those offered last week, and a somewhat more active demand, prices have still further improved. Sales about 900 head at \$6 a 8 per cwt. We hear of some transactions above and below these figures, but these quotations may be regarded as the fair average; 500 head Southern, remainder New York State Cattle.

Sheep and Lambs—Former sold at 1 50 a 1 55; extra 6 50. Lambs brought \$1 25 a 3. About 250 left over.—*Journal of Commerce.*

BOSTON WHOLESALE PRICES. Flour, Genesee common, \$6.50. Corn, prices rather declining—no Northern—Southern, 65 to 80 cents. Butter, 12 to 23c. Cheese, 6 to 8c.—Lard, 7½ to 8c. Beans, \$1.50 to \$1.75.

WOOL. The Courier says:—

"There have been some sales of fleece Wool during the past week, but a little under our former quotations. Pulled Wool begins to come in freely, but we do not hear of any large sales. The amount of domestic Wool in market at the present time is not large, but is thought to be quite sufficient for the wants of manufacturers until another shearing. The larger factories are generally supplied, with a full stock, and owing to the low prices obtained for woolen goods, some considerable portion of the machinery in the smaller factories has been stopped, and will not run again until the decline in Wool, or advance in goods, shall afford a fair prospect of remunerating prices."

Prime Saxony Fleeces, washed, lb.	45	a	50
American full blood, do	40	a	45
do 3-4 do	35	a	38
do 1-2 do	31	a	33
do 1-4 and com. do	28	a	31
Smyrna, Sheep, do	15	a	20
do unwashed, do	8	a	13
Bengal do	7	a	9
Buenos Ayres, unpicked, do	6	a	14
Extra Northern pulled lamb, do	38	a	40
Super. do do do	35	a	36
No. 1 do do do	30	a	32
2 do do do	20	a	22
3 do do do	14	a	15

FANEUIL HALL MARKET, RETAIL. Butter, lump, 27c., firkin, 16 to 22c. Turkeys, 10 to 12c. Chickens, 10 to 12c. Mutton, 6 to 12c. Eggs, 24c. Pork, whole hogs, 6 to 7c.

Honey Bees.

An acquaintance of ours, in this city, who is quite a Bee-fancier, and has closely observed and studied their habits for several years, placed a new swarm in a hive of his own construction, on the 25th June last. This hive is made to conform to the natural habits of the insect in its wild state. It is of the usual form, but closed at the bottom with a close fitting lid, covered with wire cloth, about 8 meshes to the inch. This allows all the dirt and chips of comb made by the bees to sift through, and admit sufficient air for ventilation. It is hung on butts, and can be opened to brush off any dead bees, or any other substances too large to fall through the wire. Near the top, directly over the drawers, is an inch auger hole, for the passage of the "workers." This aperture, being at the top of the swarms has always a cluster of busy bees about it, so that no miller can enter; and as there is no other mode of ingress, our friend thinks that the hives may be kept from worms, which are the great enemy of the apiary. Nothing larger than ants can go through the wire bottom; and they are easily kept away by salt. The swarm in this hive is the most busy its owner has ever witnessed, and as evidence of this, he finds the hive on the tenth day, two-thirds full of comb—nearly double what is usual for so late a swarm.—*Norwich (Ct.) News.*

BROWSE FOR SHEEP. Browse of various kinds is good for sheep in winter. They are very fond of it, as it affords a change, being a green food. The browse of oak, and other powerful astringents should be avoided. The browse of evergreens is used, not only as a wholesome food, but for its medicinal qualities, particularly pine and hemlock. And in some cases it is used to considerable extent as a substitute for other fodder. Pine and hemlock are best, but spruce and fir are also good.

Some farmers have nearly supported their sheep on browse for months, when hay was scarce. J. Whitman, of Turner, Maine, has used pine and hemlock for his sheep for more than forty years, and he has known no injury from them, but a benefit, and a saving of hay. He says that hemlock does not injure sheep with lambs. He prefers pine and hemlock boughs to spruce and fir.—*Cole's Veterinarian.*

Domestic Economy.

BEEF-TEA. When one pound of lean beef, free of fat, and separated from the bones, in the finely chopped state in which it is used for beef sausages or mince meat, is uniformly mixed with its own weight of cold water, slowly heated to boiling, and the liquid, after boiling briskly for a minute or two, is strained through a towel from the coagulated albumen, and the fibrine, now becoming hard and horny, we obtain an equal weight of the most aromatic soup, of such strength as cannot be obtained even by boiling for hours, from a piece of flesh. When mixed with salt, and the other usual additions by which soup is usually seasoned, and tinged somewhat darker by means of roasted on-

ions or burnt sugar, it forms the very best soup that can in any way be prepared from one pound of flesh.—*Liebig.*

GERMAN YEAST. The yeast prepared by the Hungarians will keep for a whole twelvemonth. During the summer season they boil a quantity of wheat bran and hops in water; the decoction is not long in fermenting, and when this has taken place they throw in a sufficient portion of bran to form the whole into a thick paste, which they work into balls that are afterwards dried by a slow heat. When wanted for use they are broken, and boiling water is poured upon them. Having stood a proper time, the fluid is decanted, and is in a fit state for leavening bread.—*Johnson's Encyclopedia of Agriculture.*

TO KEEP EGGS. About two years ago I thought I would pack some eggs in charcoal. I pounded the charcoal, and packed them in the same manner as recommended in oats, ashes, salt, &c. The result was they kept perfectly good, and these when used were as fresh and good to all appearances as new laid eggs. I have tried charcoal says the above correspondent, with the same result since.—*Agriculturist.*

SUBSTITUTE FOR SOAP. The Scientific American advises those who wish to cleanse fine muslin, of chaste and elegant colors, to boil some bran in rain water, and use the pure liquid cold for washing.—Nothing can be so simply done, and nothing can equal it for preserving the colors, and for cleaning the cloth.

CORN AND FLOUR BREAD. Prepare a thin batter, by wetting sifted meal in cold water, and then stirring it into that which is boiling; salt, and when it is lukewarm, add yeast and as much flour as there is corn meal; bake in deep dishes in an oven when risen.

CORN MUFFINS. Take one quart of butter-milk, three or four eggs well beaten, a small quantity of flour; mix them together, and make it quite thick with corn meal; add a table-spoonful of melted butter, and salt to suit the taste; butter the pan in which it is to be baked.

MOLASSES, used for cooking, is immensely improved by previous boiling and skimming.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,
and sent to subscribers on the following

TERMS:

For a single copy, - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " " - -	3 00
16 " " " " " - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. I.

WINDSOR, VT., FEBRUARY, 1848.

No. 10.

THE SCHOOL JOURNAL.

For the School Journal.

Moral Education.

NO. 1.

I presume it would be entirely superfluous for me to undertake to prove to your intelligent readers, the imperious necessity for moral education in our schools. Probably there is no man of reflection that has not noticed and lamented the rapid decline of the moral standing of our country. The wild spirit of adventure; the rash, the reckless speculation which has spread through all classes; the seemingly endless repetition of embezzlement, bank swindling, and breach of faith among our better educated citizens; political profligacy among public men; repudiation among state governments; bankruptcy among individuals: these, and other high crimes, call, in a voice that cannot be mistaken, for a thorough reform in our system of education.

But, though the community seem to be fully aware of the necessity of a change in our school system, though the call for moral education may be heard from every part of the land, still it is a lamentable and undeniable fact, that scarcely a single step has as yet been taken in the matter. If we examine our *best* schools, those in which the most striking improvements have been made, what will be the result? We may be charmed, possibly, with the progress of the pupils in the languages and in the exact sciences. In Latin and Greek, in French, Spanish and German, in Grammar and Philosophy, in Algebra and Geometry, the advance may have been truly wonderful. But, when we come to inquire respecting the culture of the *heart* and the *affections*; to ask what progress has been made in the development of the *conscience*; what efforts to promote *self-knowledge*; to repress *selfishness* and *sensuality*; to encourage *generosity* and *magnanimity*,—*moral courage* and *self-restraint*; if the least expectation of a favorable answer has been entertained, it is to be feared that we shall be most grievously disappointed. "Nothing," probably, will be the correct reply; unless, indeed, the teacher should direct our attention to a series of sage abstractions, or moral precepts, printed in large type, and hung around the walls of the school-room, a practice common in the cities, with the intention, doubtless, by some sort of magical charm, to regulate the passions, cultivate the affections, and meliorate the heart. But available power for the conduct of life is not to be acquired in this manner. We are not to be deterred from mis-

chief by the finger of precept pointing to "wise saws and modern instances." The mere *reading* or *hearing* of sage proverbs will avail little or nothing.—There must be personal, mental effort on the part of the child himself. Food must be digested before it can be incorporated into the system. The mind of the pupil must grapple and work with knowledge before it can become a part of himself, be properly transformed into his own being.

How long before we shall begin to act in good earnest in this important matter! How long shall we stand trembling on the brink! Have we not *talked* enough on the subject? Is it not time that some efficient steps were taken to carry into effect what all admit to be essentially necessary? Shall we strive, and strive forever, to make our children all head and no heart! My object in this series of papers is to present a simple and easy plan for conducting MORAL EDUCATION in the COMMON SCHOOL. Will not my readers give it a patient hearing; and, if it meet the approval of their sober judgment, will they not give it a fair trial! That imperfections will be found in the plan I have no doubt. I hope, however, that it will be viewed with candor and indulgence, as the unaided effort of a pioneer. One good effect, I trust, will result, viz., that it will be the means of exciting abler and more experienced writers to enter on the hitherto almost untrodden field of *practical* moral training for the primary school.

What, then, is Moral Education! What is the duty of the superintendents and teachers in relation to the morals of the rising generation! To my mind, the answer to these questions appears plain, direct, unequivocal. God has given to every child a *conscience*. He has implanted in his bosom intuitive notions of right and wrong. Does any one doubt the fact! Let him ask a young child, one barely old enough to speak, whether it be right or wrong to lie, to steal, to fight, or any one of a hundred similar questions, and such a doubt will instantly vanish. The answer will be given correctly, and without the least hesitation. No, indeed. Our all-seeing, beneficent Creator has *not* left the grand moral truths, the fundamental principles of right and wrong, to the slow processes of reason. The principles of moral philosophy have not to be studied before the right and the true can be distinguished from the wrong and the false. Had it been so, the greater part of mankind would all their lives have been devoid of moral responsibility. But, in fact, they are intuitive. They form a part of our mental constitution. They are as completely instinctive in man, as the knowledge by which

the bird builds its nest, or the bee its honeycomb.—Sad, indeed, would have been the condition of humanity had the case been otherwise. For the *reasoning* powers of the great mass of mankind are slowly, and at best very imperfectly developed in almost all; with many they sleep from the birth to the grave. But unfortunately we never think of addressing the conscience. We are ready enough to impose our notions on the child. We are sufficiently apt at telling him he *must* do this, he *must* not do that. But how rare to hear the parent or teacher refer the child as a guide to the Divine Light within, to what Paul terms “the work of the law *written* in their hearts.” And even this neglect, wrong as it is, is not the worst. We not only *refrain* from cultivating the conscience, but, in sober reality, we habitually *pervert* the moral nature of youth, by holding out gross, *sensual* inducements for compliance with our precepts; by leading children to look for the reward of virtue and the punishment of vice where they never can be found. God has placed these rewards *within the soul*. We instruct the child, orally, as well as through our school-books, to look for them without. Yes. Our children are absolutely *taught* to consider the momentary gratification of a distempered appetite as their supreme good. Listen to parental teaching, or examine our reading school books; (and truly sorry am I to say that not a few of the story-books written for Sabbath Schools must be included in this censure,) examine these books, I say, and see if it be not the case, that whenever the attempt is made to inculcate a moral lesson, recourse is had to the lowest grade of motives, as if youth were insensible to all others, than which there cannot possibly be a greater mistake. The poor child is fed on nothing but husks. Such wretched trash as cakes, fruit, toys, prints, are held out as the reward, the *natural* reward of virtue; while deprivations, pains, even the common accidents of life are dragged in as the chastisements of vice. Yes. It is well if they are not even spoken of as *providential* occurrences. Tangible rewards and tangible punishments, the gratification of our distempered appetites, the attainment of our short-sighted wishes, these form the burden of nearly all the moral instruction of childhood, whether written or oral. Does this accord with the plan of Providence? Is it thus that God rewards piety, virtue, self-denial, and self-sacrifice? Has a virtuous course of life any natural connexion either with outward prosperity or adversity? If industry, prudence, and economy bring about prosperity; and idleness, thoughtlessness, and improvidence lead to adversity, why should we teach our children otherwise? Why should we instil the idea that what is called *success* in life depends on a *virtuous* course? Will such sordid notions lead to any thing but disappointment, scepticism, or murmurings against Providence?

In order the more distinctly to show how universally prevalent such sordid notions are, let us suppose that some one was now about to read to us an article entitled *Virtue Rewarded*. Would not the hero of the tale be expected to receive something tangible? some outward gratification? honor, dignity, or wealth?

Would the calm and constant sunshine of the soul which illuminates the breast of the good man; would the serenity and inward delight which God has *unalterably* connected with the performance of duty be suggested to the mind by this title; or would it be some extraneous indulgence, some adventitious, sensual gratification? Some, no doubt, may object, that a child could appreciate nothing of a higher nature; that it was necessary to speak of such rewards as he could understand. But this is entirely a mistake, as I shall presently show. The truth can be made intelligible to the youngest child who can read. And even if it were *not* so, surely it would still be the height of imprudence to implant false notions in the mind of youth; to allure with expectations that *never* can be realized; and, what is still worse, teach him to set a false value on extrinsic glitter, and to overlook or despise the only true sources of happiness which lie within. Fathers, mothers, teachers! allow me to make a serious appeal to you on this most important subject. Do we not, one and all of us, go habitually wrong here? Do we not actually *implant* these false notions in the infant mind; and, at a later stage of life, when their roots have become entwined in their hearts, do we not then foolishly complain because of the difficulty of eradicating them? Is this a wise, is it a rational course? DYMOND.

TO BE CONTINUED.

Progress in New-Hampshire.

We like to point our readers to instructive examples,—as facts speak more effectually than words.—A writer in one of the New-Hampshire papers (we have forgotten which) gives the following account of progress in one town and county:—

“More than twenty years ago, the Rev. Mr. Leonard, of Dublin, in Cheshire county, began to devote his time and talents, to this subject, and determined, if possible, to raise the standard of Education, at least in his own town. Like the good Oberlin, he examined personally, and visited often, every district, previously taking care that no unqualified man or woman be permitted to take upon himself or herself, the holy task of instructing the young. Perhaps no town of its size in the State, has brought up and sent forth into the world, more young men and women, qualified for business, for the professions, and for teaching.—Upwards of 20 attended the last Institute at Keene, and are now employed, mostly in that county. Other towns caught the true spirit, and a County Association was formed seven or eight years ago. Twice or thrice a year this Association meets, ever changing the location; and they have now, I understand, crowded assemblies. The whole town, as it were, attends, to hear what may be said on this great subject. These meetings have already been held, in about 19 or 14 out of the 23 towns. In very many of the towns, similar associations, to interest the inhabitants, are held in each school district every winter. *But this is not all.* It was found that the greatest obstruction to progress was the difficulty of obtaining

competent Teachers. We could possibly put up with cold, inconvenient, unventilated school-houses, when in care of a first rate teacher, but the teacher is too often *rated* with the "house he lives in."

An Institute for teachers, (a good substitute for Normal Schools) was determined on, and two sessions a year, of a month each, were supported for two years, by private subscriptions. At length the Legislature has nobly responded to the calls on this great subject, permitted the towns to raise money, and appointed a School Commissioner to aid by public Lectures, visits, and the collection of useful statistics. I am told that 16 or 17 of the towns in Cheshire, out of 22, raised two and three per cent. on their school tax for this laudable purpose, the last year; and it is believed all, or nearly all will aid the work next March. Besides severe drilling in the branches to be taught in our Common Schools, great attention is paid to subjects not less important, the best methods of *School government*: the art of *interesting the scholars*; and deeply inculcating the principles of *Christian morality*.

Formerly it was very seldom that the Parent went near the school-house where his children were being educated, for weal or for woe. It is not so now, there are visitors almost every day; and at the Examinations by the Town Committees, the houses are often crowded."

'Oh,' saith the heartless reader, 'is not this a pretty business! Do you really expect me to engage in a piece of work that will require, according to your own showing, twenty years, and more?' No, Mr. Sitsill; we expect no such thing of you. Enough if you can draw wood to the door to-day to make your wife's pot boil to-morrow. But we do suppose that there are men in Vermont who are willing to undertake the doing of good, as a regular employment, for a life-time; especially when that good is to be a blessing to their own firesides, to their own children and their own hearts, from month to month, during the whole time, and to become in the end the best inheritance they can leave to their children and their children's children.

The First Reply.

The first answer that has reached us to the inquiries in our last respecting the future circulation of the Journal, says: "I can assure you that the paper is liked, and I think I can double the subscription for next year." This is from a town where a good number of copies are now taken.

Report of the State Superintendent.

The second Annual Report of the State Superintendent of Common Schools is published. Copies have been sent to every school district in the State; and we trust that the citizens will all take care to secure the reading of it as soon as may be. It is full of matter of the highest importance to every one.—An extract will be found in this paper; and we shall make farther use of it hereafter.

It is certainly good cause of rejoicing that the Superintendent is able to report some progress during

the year in regard to school houses, apparatus, textbooks, teachers, teachers' wages, and attendance of scholars! An excellent beginning! We have fairly set out in the right way. Upon this point we must add here a single paragraph from the Report, showing that even the particulars mentioned do not comprise all the evidences of progress:—

EXTRACT.

Aside from the evidences that a gradual improvement in our schools is going on, furnished by the statistical results already given, it appears from the reports of Superintendents that an advancement is making in other particulars, in regard to which statistical tables and figures could afford us no information. A more extended feeling of interest on the part of Parents, a greater degree of neatness in the appearance of the school room, more system in the general arrangements of the school, improved modes of instruction, better discipline and management, and a more general awakening of mind and enlivening of interest, both on the part of teacher and pupil, are among those favorable indications which may be regarded as earnestness of present, as well as future, good.

MR. GARNET'S TABLE. The table in No. 9, corrected, is as follows:—

A box 24 inches by 18 square and 23.5 inches deep, will contain a barrel (beer measure), or 10,152 cubic inches.*

A box 24 inches by 18 square and 11.75 deep, will contain half a barrel (beer measure), or 5,076 cubic inches.

A box 16 inches by 16 square and 8 inches deep, will contain one bushel (Winchester,) or 2,150.4 cubic inches.

A box 12 inches by 11.2 square and 8 inches deep, will contain half a bushel, or 1,075.2 cubic inches.

A box 8 inches by 8 square and 8.4 inches deep, will contain one peck, or 537.6 cubic inches.

A box 8 inches by 8 square and 4.2 inches deep, will contain one half peck, or 268.8 cubic inches.

A box 7 inches by 4 square and 4.8 inches deep, will contain one half a gallon (dry measure), or 134.4 cubic inches.

A box 4 inches by 4 square and 4.2 inches deep, will contain one quart, or 67.2 cubic inches.

F. L. B.

*Mr. Garnet doubtless had in mind the Virginia barrel of corn, or 5 bushels, (a measure unknown in New England,) which would be 10,752 cubic inches, instead of 10,832, as the table copied in our last has it. Eds.

RESPONSIBILITY OF PARENTS. In Prussia every parent is obliged by law to send his children regularly to school, or otherwise to provide for them ample means of instruction. In Iceland, if a minor commits a crime, the parents are immediately arrested, and unless they can prove to the satisfaction of the magistrate that they have afforded to the child all needed opportunities for instruction, the penalty of the crime is inflicted upon them, and the child is placed under proper instruction.

The Power of Common Schools.

In the 11th Report of the Massachusetts Board of Education, just published, nearly a hundred pages are devoted to the subject of "the power of Common Schools to redeem the State from social vices and crimes." A Circular was sent to several persons, making inquiries in relation to it, and the Report embodies the replies, at length, of John Griscom, Esq., D. P. Page, Esq., Rev. Solomon Adams, Rev. Jacob Abbott, F. A. Adams, Esq., Prof. E. A. Andrews, Roger S. Howard, Esq., and Miss Catharine E. Beecher. We copy the letter of Mr. Howard, who is one of ourselves and officially connected with our own school system ;

LETTER FROM ROGER S. HOWARD, ESQ.

THETFORD, Vt. Sept. 1, 1847.

HON. HORACE MANN,

DEAR SIR :—In the circular you recently sent me, you submit to my consideration the following specific inquiries :

"1st. How many years have you been engaged in school-keeping, and whether in the country or in populous towns or cities ?

"2d. About how many children have you had under your care ; of which sex, and between what ages ?

"3d. Should all our schools be kept by teachers of high intellectual and moral qualifications, and should all the children in the community be brought within these schools, for ten months in a year, from the age of four to that of sixteen years ; then, what proportion,—what per-centage,—of such children as you have had under your care, could, in your opinion, be so educated and trained, that their existence, on going out into the world, would be a benefit and not a detriment, an honor and not a shame, to society ? Or, to state the question in a general form, if all children were brought within the salutary and auspicious influences I have here supposed, what per-centage of them should you pronounce to be irreclaimable and hopeless ?"

In reply to these inquiries, I would say that I taught school, with scarcely any interruption, fifteen years in Newburyport. I had previously, during my collegiate course of study, taught occasionally a district school in the country. Of the fifteen years I taught in Newburyport, about twelve were spent in teaching boys ; the rest of the time, I had girls under my instruction. The usual number of my scholars was fifty—the ages, for the most part, between twelve and sixteen,—and the average time of continuing in school, I should think, about three years. From this statement, it will easily be perceived about how many different children I have had under my care.

To your third inquiry, I cannot give a definite answer founded on actual experience and observation ; for I have never seen the conditions you have stated fully complied with. I have never known a community, in which *all* the children, during the term of time specified, have been sent *constantly* to well-furnished and well-arranged schools, under the care of teachers of the high moral and intellectual qualities you have supposed. But, judging from what I have

seen and do know, if the conditions you have mentioned were strictly complied with ;—if the attendance of the scholars could be as universal, constant and long-continued as you have stated, if the teachers were men of those high intellectual and moral qualities,—apt to teach, and devoted to their work, and favored with that blessing which the word and providence of God teach us always to expect on our honest, earnest and well-directed efforts in so good a cause,—on these conditions, and under these circumstances, I do not hesitate to express the opinion that the failures need not be,—would not be,—one per cent. Else, what is the meaning of that explicit declaration of the Bible. "Train up a child in the way he should go, and when he is old he will not depart from it!"

I am aware that the opinion I have expressed above may by some be considered extravagant. But I have not formed or expressed it without deliberation. During all my experience as a teacher, I have never known the scholar whom, if brought within the reach of those salutary and auspicious influences for the length of time named, I should now be willing to believe, or dare to pronounce, utterly hopeless and irreclaimable. I do not mean to say that I never failed. But I do say that, in some of the most difficult and desperate cases I have ever met with, as a teacher, the result of direct, special and persevering effort was such as to create the conviction that, with more zeal, patience and perseverance, and especially with the favoring influences above alluded to, success would have been certain and complete. And this conviction became more settled and strong, the longer I continued to teach.

The power of a truly enlightened and Christian system of Common School education is but little understood and appreciated. When parents shall begin to feel, as they ought, its importance,—when the community generally shall be willing to make the necessary efforts and sacrifices,—and when teachers of the requisite literary qualifications, and of high moral aims, shall enter upon the work with a martyr's zeal, conscious that every day they are making deathless impressions upon immortal minds,—then shall we see, as I believe, results which will greatly surpass the highest expectations of the most ardent and enthusiastic advocates of popular education.

But I am occupying more space than I intended, and will only add that I am, dear sir,

Very respectfully and truly yours,
ROGER S. HOWARD.

For the School Journal.

Examination of Teachers and of Schools.

The examination of teachers and schools being in a great measure *new* in this State, some of the Superintendents are frequently at a loss how to conduct them on their first appointment. Might it not be useful, then, if such gentlemen as have some experience in the matter should occasionally publish *lists of questions* in the Journal, suitable for such examinations ? Nay, I might ask, would not even the *most experienced* probably be benefited by the ideas of many minds thus brought into a focus ? For my own part, I have

always felt, that, however little I may have been embarrassed on such occasions, my own mind would have been improved, and the cause of education advanced, by an interchange of views on this most important subject.

There is another way in which such lists of questions may be beneficial. It is universally admitted that it is injurious to the pupil to be confined too closely to the text-book. What more common, for instance, than an admonition to the teacher to endeavor to excite thought, to create a new interest in his classes by putting the questions from the book into a *new form*, or to break up the mechanical monotony of the recitation, by leading the pupils into new collateral channels. Unfortunately few teachers are capable of conducting their exercises thus. All the aid possible, therefore, ought to be offered them. And surely nothing would better subserve this end than the proposed lists, if they were not mere copies, but *original* drafts. In the hope that such a plan may meet your approbation, and that of your readers, I send you a series of questions on *Modern Geography*, which I propose to follow up by a similar series on *Bible Geography*, and then take up the other school topics of History, Grammar, Arithmetic, &c.

In my examinations of teachers, I have generally found them most deficient in the *principles* of the sciences they profess to teach. For instance, many who would not be at a loss in locating any particular place, would yet be entirely ignorant of the nature and use of the mathematical lines drawn on the globes and maps. They could tell the latitude of the tropics and polar circles, for instance, but know no reason for placing them in that locality. I do not remember that I have found one who could distinguish between a great and small circle. And, although most could solve any simple question in Arithmetic, yet this was generally done by blindly following the mechanical rule. When asked for the why or the wherefore, they were totally at a loss. Allow me, then, to suggest, that if these series should be used in examinations, a selection of questions involving *principles* should invariably be preferred. I would also recommend, that the teachers should be provided with slates at their examinations, and that the questions should be answered *in writing*, in place of orally. In this way, every question is answered *by the whole class* instead of by one only. A judgment can thus also be formed, without any special exercise, of their proficiency in penmanship, orthography, punctuation, use of capitals, and manner of expression. The teachers, of course, should be notified that these matters will be looked into, when the answers are examined. Classes in school would be as much benefitted as teachers by such a practice, regularly followed out.

One suggestion more before I give my list of questions. In every town in this county, the teachers hold back, more or less, from the public examinations, partly from diffidence; often because they have not then secured a school. Such a practice is in many respects injurious. It impairs the usefulness of the county Superintendent, by excluding him from participation in the work of examination. It enhances the expense of the system to the town treasuries, thus

tending to render it odious in the eyes of the people. And, besides, a private examination can never be so beneficial as a public one. At the latter the county Superintendent can always be present, and thus be the means of *diffusing* any valuable suggestion that may arise *through the whole county*. This evil custom may easily be stopped. Let the expense of *private* examinations be thrown by the statute on the delinquent party, and we shall hear no more of it. What I have to suggest, then, is, that in every county where the practice is common, the county Superintendent should circulate a memorial, to which should be attached at least his own name and that of his coadjutors, requesting an immediate amendment of the statute to the above effect. As the law makes no provision for filling a vacancy in the office of either town or county Superintendent, perhaps it might be as well that this defect should also be noticed in the memorial.

QUESTIONS IN GEOGRAPHY.

1. What is a great circle? Name the great circles.
2. What is a small circle? Name them.
3. What are the tropics?
4. Why placed at $23^{\circ} 28'$ of latitude?
5. Latitude of polar circles? Why?
6. How many degrees of latitude in the torrid zone? How many of longitude?
7. How many degrees of latitude and longitude in the two temperate zones?
8. What point on the earth's surface has neither latitude nor longitude?
9. What is a zone?
10. How many geographical miles in a degree of latitude? In a degree of longitude? Why so?
11. If two vessels, 100 miles apart, in the latitude of New York, and in the middle of the Atlantic, were each to sail 100 miles directly south, would their distance apart be the same as before, or increased, or diminished?
12. What is the use of the artificial lines on maps and globes?
13. How do navigators tell their course across the trackless deep when out of sight of land?
14. How do they ascertain their precise situation; i. e., how do they know their latitude and longitude when long out of sight of land?
15. Repeat the names of the European continental states, commencing with Spain and Portugal, passing along the eastern coast to the North Cape, thence along the S. E. and E. boundary to the place of beginning, noting all the remarkable cities, rivers mountains, and seas.
16. What other important state forms a part of Europe?
17. On what part of the earth's surface could a man be stationed, so that, if he were to turn half round, he would still face in the same direction?
18. Pursue a similar course to that of the 15th question with Asia, Africa, and South America.
19. Name an important insular Asiatic power.
20. Name the old thirteen American States, commencing at the N. E., noting as before, their chief cities, rivers, lakes, mountains, and seas.

21. Name the other States in like manner, in the order of their admission into the Union.

22. Say what States are entirely inland, i. e. border neither on the sea, nor on the territory of a foreign power.

23. Mention the other powers and colonies in North America.

24. Name the three main rivers that drain the great North American Central Valley.

25. Ascend, in fancy, the chief of these rivers from its mouth to its source, naming in order its main branches on the right and left.

26. What is meant by the right and left bank of a river?

27. Which of these three great rivers drain the largest body of land?

28. Which of them exposes the largest surface to the air?

29. What is meant by a delta, and why is it so called?

30. Name all the rivers that empty their waters by a delta.

31. Name the three great peninsulas in the south of Europe. The three in the south of Asia. The two in the north of Europe.

32. Reckoning only two continents, which is the largest island in the world? The second?

33. Making no distinction between islands and continents, (there is none save in size) which is the largest island then? The second?

34. Are all the rivers, lakes, seas, and oceans in the world connected together? If not, name those which are unconnected.

35. Supposing you were sailing from Sparta in Greece to the United States, keeping as nearly as possible on a parallel of latitude, a course which would place all the European islands on your right, specify the states and large islands on your right and left.

36. Where is the Levant?

37. Suppose you were to travel from Philadelphia to New Orleans, via Pittsburgh, Pennsylvania, and return to Philadelphia by sea, notice the states you would pass through, or lying on your right and left, and every place you pass near worthy of note.

38. Make a similar imaginary tour from New York to Niagara Falls, Montreal, Burlington, Vt., Boston, and back to New York, noticing your modes of public conveyance, and remarkable objects on or near your route.

39. A similar tour from New York to Astoria, or returning by the isthmus of Panama.

40. A similar tour from Vienna to the Black Sea, thence to Constantinople, Athens, Naples, Rome, Leghorn, Geneva, Marseilles, Paris, Brussels, Cologne, Vienna.

41. Where are the Balkan mountains? the Alps? the Carpathian? the Himalah? the Caucasian? Mount Ararat, Blanc, Elias? the Apennines? the Sierra Morena? the Cheviot? the Pyrenees?

42. Where are the Sandwich isles? In what direction thence the Society, Marquesas, and Friendly isles?

43. In which of these groups is Tahiti?

44. Where are the Canary isles, and in what direction thence the Madeira and Capô de Verd islands?

45. Where are the Balearic, Philippine, Japan, and Ionian isles?

THE teachers ought to write their answers without recourse to maps. Their pupils may be allowed to study them on the maps, but should not be allowed to use them at their recitations, or while writing their answers. P.

Pittsford, Jan. 1, 1848.

Mathematical Questions.

Our correspondent "P." in sending us some questions (one published in our last) remarks that, in order to be profitable, such questions should be difficult enough to excite the ingenuity and enlarge the knowledge of both teachers and pupils; and that the answers ought always to be accompanied by the rationale and proof of their correctness. We agree with him entirely; and add that correspondents would oblige us by sending solutions with the questions, that we may be able to judge of their appropriateness at once, without taking time to solve them.

1. East of my house the ground rises one foot in advancing five; 160 feet from the house due east is a spring; south of the spring is a pine tree, the first branch of which is 64 feet from the ground, and a line from the spring to it is 10 rods in length. The branch is 32 feet higher than the ground by my house. What is the distance from my house to the foot of the pine? S. K.

2. A vessel leaves Boston, and having been tossed about in foul weather for some days, finds that when it is 12 o'clock by the sun, it is only 50 minutes past 11 by the watch. Is the vessel east or west of Boston, and how many degrees? PHILM.

Solution of Arithmetical Question in No. Nine.

Saltpetre 7,

Sulphur 3,

10 : 7 :: 80 : 56 saltpetre in first quantity.

10 : 3 :: 80 : 24 sulphur " "

After the addition they stand as 4 : 11; then say, 4 : 11 :: 24 to whole quantity of saltpetre, which we find to be 66, from which take first quantity (56), and we have for our answer 10 lbs.

Proof. $24 \div 4 = 6$, which is equal to $66 \div 11$; or thus: $4 : 11 :: 24 : 66$,—the product of extremes being equal to the product of means. S. K.

[The author of the 2d question calls himself "a school-boy;" and says he is obliged to borrow the Journal, because he is poor and out of health, and has no one to buy it for him. He adds that he shall "try hard to become a subscriber." He sends a correct answer to the question in our last, but without the process. His letter is one of the most encouraging we have ever received; for it shows that we actually reach those who have the spirit of improvement in their bosoms.—Eds.]

Teachers.

From the Second Annual Report of the State Superintendent.

There can be no cause operating upon our schools that will exert more influence in promoting their advancement than an advance in the qualifications of teachers—no event in the history of these institutions that would afford so certain a pledge, that substantial progress is to be made, as the awakening of a deep and anxious interest among instructors to secure a preparation for their responsible duties. And, upon this point, the evidence from different parts of the State, is decidedly of a favorable character. The provision of the present school law requiring the examination of teachers has produced in this relation two distinct and marked results. In the first place, very many, who, under a system that allowed teachers to enter our schools without examination, and almost without their qualifications being thought of, would have offered themselves and found ready employment, because they could compete successfully with the best, have, under the present system of regulations, refrained to present themselves, and turned their attention to other pursuits. • • • • •

It appears that the regulation making examination a prerequisite to teaching has had a favorable effect in securing to us a better class of teachers, independent of any rejections of candidates when subjected to this test—for such rejections have been but few.—It is true that instances have now and then occurred in which the applicant was adjudged unworthy to receive a license; and one County Superintendent has particularly reported a case in which he rejected a candidate who pronounced the Mississippi the largest river in New England, and alledged that our pilgrim fathers landed at Plymouth 1847 years ago—with other facts in Geography, History and Chronology equally new and astonishing to learned men. • • • • •

The other mode, in which examinations have exerted a beneficial influence, has been in their operating as an inducement to those who were preparing for this ordeal to make increased efforts to secure the desirable qualifications. The formation of teachers' classes in our academies and high schools; the establishment of Teachers' Institutes in many of the counties of the State; the opening of a Normal School; and the respectable extent to which teachers have availed themselves of these means of improvement, together with the attendance of many for this specific purpose in such of our high schools as do not propose to pay any special and distinct attention to the object of preparing teachers for their work—are all conclusive and important evidences that the work of improvement is going on. So that as legitimate results of our system of examinations—and that too without the exercise of any severity—we are not only securing as teachers those best fitted to be such in advance, but are also securing increased efforts on their part to reach a yet higher grade of qualification.

Nor, in fact are these the only benefits in the way of elevating the standard of qualification among teachers that may fairly be ascribed to our system of examinations. This is an incidental benefit growing out

of the process itself. Assuming that no better class of teachers presented themselves than were formerly found in this employment, and that the examination could not even induce the candidate to review the studies he expected to teach, yet the examination itself would be a process of instruction, and would serve as an occasion, of which the examiner might avail himself to communicate many profitable hints and suggestions.

But a result yet more beneficial is this. The mere fact, that the law is made to demand an examination, implies that there is in the public mind an importance attached to the business of teaching—that consequences of some moment are depending upon the manner in which its duties are performed. This view of the matter is calculated to awaken in the mind of the teacher some thought and inquiry in regard to the proper manner of performing his duty, and to implant in his bosom a feeling of responsibility, which he could otherwise never have been expected to entertain. A work that appears in the estimation of the public so important, must begin to appear so to him. And if no other good were to be derived from the system of examinations, still this calling into exercise the energies of the teacher's own mind, and this awakening of his soul to new promptings of fidelity in the discharge of his duties, would be attainments of untold value—far more than compensating for the paltry dollars and cents which it may cost to secure them. The Superintendent has no desire to represent the advancement which has been made in the character and qualifications of teachers as greater than it really is—not would he by any means be understood to imply that there is no further room for improvement in this respect. He does not regard the advancement already secured to be so great and palpable as to arrest irresistibly the attention of the careless observer, much less of him who would avert his eyes; but he believes the progress made to be distinct and indisputable.—While, however, he considers the value of teachers to have appreciably increased as a general result, he believes there is room for further and still greater attainments in this direction.

The Superintendent has dwelt much upon this point, because he regards an improvement in the qualifications of teachers as constituting the most important element in the great work of advancing the cause of education—and consequently as affording the surest indication that the enterprise of improving our schools is really and successfully progressing. It was remarked substantially in the Superintendent's report for last year, that aside from the lack of thoroughly qualified teachers, there were other evils which seriously impaired the usefulness of our schools; but while the incompetent teacher would be utterly overwhelmed with them, the well qualified would rise above them and still succeed in accomplishing the more substantial and useful purposes of instruction.

The truth of the sentiment uttered by the distinguished French statesman and philanthropist, M. Guizot—"as is the teacher so is the school,"—cannot be too strongly impressed upon the public mind. If the teacher's intellectual habits are slothful and inco-

tive, the pupils will gradually become so, if not so before. If the teacher fail to observe closely and think carefully, to see clearly and understand fully, the pupil will soon form the habit of doing the same. If the teacher is loose in his morals, vulgar in his language, or slovenly in his person, these characteristics will ere long be indelibly stamped upon the pupil. It cannot be expected that a child will rise above the standards set before him; for these will be continually drawing his eye and his attention downwards, even while some innate promptings, or occasional influences from other sources, might be urging his thoughts and aspirations to a higher point of excellence. It is, perhaps, difficult to appreciate the extent to which the influence of the teacher determines the character and consequent destiny of those who look to him as their educational guide.

With such views, the Superintendent cannot but feel a strong conviction that efforts to elevate the standard of qualifications for the duties of the instructor must constitute a prominent and important part of the great work before us. Under such impressions, he has recommended to county superintendents to direct their attention mainly to the object of awakening in the minds of teachers a deeper sense of the importance and responsibility of their employment, and to put forth efforts to aid them in securing a better preparation for its duties, by way of meeting them in conventions, of establishing teachers' institutes, and of endeavoring to induce teachers to avail themselves of these means of improvement. It is believed that a given amount of labor would, in no other direction, tell so effectively in advancing the main enterprise.

This view of the subject suggests also the advantages which would be derived from a small provision being made by the State for the benefit of Teachers' Institutes, perhaps upon the plan on which appropriations are now made for agricultural societies. The support of these institutes is now a somewhat heavy burden of expense upon a few—mainly our superintendents. It is scarcely to be expected that teachers, at the present low rates of compensation, should do much more than defray the expense of their own board and other incidental charges while attending them, without paying the necessary expense for lectures and instructors.

"Neighbor Simple," said Mr. Farsight, one bright July morning, when Mr. Simple was mowing in a lot, where the grass stood so thinly, that the spires looked lonesome;—"why, neighbor Simple, you have a fine lot here, with a strong soil, but your blades of grass are so far apart, that they might grow into hoop poles and not crowd each other." "Yes," said Mr. Simple, "I've been thinking I was almost a fool, for I ought to have sowed a bushel of good hay seed upon this piece, but the truth is, I bought only a peck and so I scattered it about so much the thinner, and now I see I've lost a ton or two of hay by it."—"Well," said Mr. Farsight, "don't you think you was about as near being a fool, when you voted, last town-meeting, against granting any more school money for sowing the seeds of knowledge in the minds of the children,—as you was when you scattered a peck of

hay-seed, when you ought to have sowed a bushel? Now, remember, neighbor Simple, what I tell you;—next year, wherever there is not grass in this lot, there'll be weeds."—*Common School Journal.*

Losses from Irregular Attendance.

It appears from the report of 1841, that over \$1, 100,000 were spent during 1839, for the support of the district schools. During the same year from the reports of the visitors and other sources of authentic information, it is certain that nearly one-third of all the school children of the state were daily absent.—Assuming the number, however, to be but one quarter, it follows that more than one hundred and fifty thousand children have constantly lost the advantage of this great expenditure; or in other words, more than \$250,000 has been utterly wasted. For it must be remembered that this large appropriation is for the benefit of all, and that it is so far unproductive, as it fails of accomplishing its destined object; and as an average of less than three quarters of the children attend on the schools, it is therefore evident that the money only produces three quarters of its expected fruits; the other quarter is wholly barren, and thus there is an actual waste of money to the state, exceeding two hundred and fifty thousand dollars annually.

But it may be urged that all of these children attend at least a few days, and thus receive some benefit. In the evil any less that the education of nearly all the children in this state, is constantly interrupted, confused and impaired by irregular attendance, than it would be if a quarter of the whole number never went to school and the residue received a thorough, enlarged and safe education? It would, we admit, be more apparent if the evil were thus concentrated, but it by no means follows, that it would be more aggravated or dangerous.

But this exposition shows not the extent of the evil, it hardly approximates it. The child who absents himself one day of the week, not only loses that day's study, and with it a portion of that interest in the pursuit of knowledge which is essential to advancement; but also impairs the rights and lessens the advantages of his more regular classmates. For these incessant absences dishearten the teacher, and confuse and disorganize the school, rendering classification impracticable and systematic study utterly impossible. In this manner, the evil pervades the whole school, the absence of one proves an injury to all, and the money of the state, besides losing one quarter of its efficacy by the non-attendance of the children, loses perhaps as much more from the injury such absences inflict on others.—*N. Y. Legislative Report.*

RECIPE FOR MOTHERS. A sensible woman of the doctor's acquaintance, (the mother of a young family,) entered so far into his views upon the subject, that she taught her children, from their earliest childhood, to consider ill humor as a disorder which was to be cured by physic. Accordingly she had always small doses ready, and the little patients whenever it was thought needful, took rhubarb for the crossness. No punishment was required.—*Souley's Literary Pastimes.*

THE AGRICULTURIST.

Knowledge is Power.

We will not write an essay on this theme. A few facts may be of use, by way of showing how good schools promote the efficiency of manual labor; how by a little head-work an immensity of hand-work may be saved, or the hourly value of hand-work vastly increased.

Suppose we have a block of squared granite weighing 1060 pounds to move. It has been found by experiment that:—

To drag it along the floor of a roughly chiselled quarry requires a force equal to 780 lbs.

To draw it over a floor of planks, 652 lbs.

If placed on a platform of wood, to draw it over the same floor, 606 lbs.

If the two surfaces of wood be soaped, 182 lbs.

Placed on rollers 4 inches in diameter, 34 lbs.

With the same rollers on a wooden platform, 92 lbs.

With the latest railroad improvements, as to track and wheels, less than 4 lbs.

The 780 lbs. in the first instance and the 4 lbs. in the last, represent the muscular strength required; the difference between the two,—or 776—the power of knowledge in that case—the power of knowledge being to the muscular power in the last experiment as 776 to 4; or one man who *knows how*, can do as much as 188 men who can only pull!

Again: A good hand weaver in the vigor of life, can weave two pieces of 9-8ths shirting a week. Between 1823 and 1833, the steam-loom was so improved that one hand 15 to 20 years old, assisted by a girl 12 years old, could weave 18 or 20 similar pieces in a week. Here then, by the power of knowledge, a lad and girl were enabled to do nine or ten times as much work as an experienced workman.

Again: It is said that 40,000 females are employed in Massachusetts in manufactures of cotton, straw, &c., and that the annual value of their labor is \$100 each, or \$4,000,000 for the whole. It appears from the observation of manufacturers that there is a difference of not less than 50 per cent. between the earnings of the least educated and the best educated of these females. Now any one can see, by a simple calculation, that the wealth of the state is affected, to the extent of millions of dollars a year by the question whether these females belong to the best educated or the least educated class. Here knowledge, being power, very quickly and palpably becomes cash.

Again: We quote the following statements from a letter addressed by James K. Mills, Esq., of Boston, a gentleman extensively concerned in manufacturing, to Hon. Horace Mann. He is speaking of a statement made from the books of a manufacturing company:—

"The average number of operatives annually employed for the last three years, is 1,200. Of this number there are 45 unable to write their names, or about 3½ per cent.

"The average of women's wages, in the depart-

ments requiring the most skill, is \$2.50 per week, exclusive of board.

"The average of wages in the lowest departments is \$1.25 per week.

"Of the 45 who are unable to write, 29, or about two-thirds, are employed in the lowest department. The difference between the wages earned by the 45, and the average wages of an equal number of the best-educated class, is about 27 per cent. in favor of the latter.

"The difference between the wages earned by 29 of the lowest class, and the same number in the higher, is 66 per cent."

Mr. Mills adds that 63 persons from Manchester, Eng., were procured and employed at one time, part of whom had been accustomed to work in cotton mills; but they were without education, and their earnings, at the same work and with the same advantages, only about two-thirds of those of our lowest class. And he thinks that the best cotton mill in New England, with only such operatives as the 45 mentioned in the above extract, would never yield the proprietor a profit. He says that very few who have not enjoyed the advantages of a common school education ever rise above the lowest class; and that the labor of this class, when even a moderate degree of manual or mental dexterity is required, is unproductive.

J. Clark, Esq., of Lowell, who had had about 1500 persons under his superintendence on an average for eight years, says:—

"On our pay-roll for the last month, are borne the names of 1229 female operatives, 40 of whom received for their pay by 'making their mark.' Twenty-six of these have been employed in job-work, that is, they were paid according to the quantity of work turned off from their machines. The average pay of these twenty-six falls 18½ per cent. below the general average of those engaged in the same department.

"Again, we have in our mills about 150 females who have, at some time, been engaged in *teaching schools*. Many of them teach during the summer months, and work in the mills in winter. The average wages of these ex-teachers I find to be 17½ per cent. above the general average of our mills, and about 40 per cent. above the wages of the twenty-six who cannot write their names."

The following statement is by Jonathan Crane, Esq., also in a letter to Mr. Mann:—

"My principal business for about ten years past, has been grading railroads. During that time the number of men employed has varied from 50 to 350, nearly all Irishmen, with the exception of superintendents. Some facts have been so apparent, that my superintendents and myself could not but notice them;—these I will freely give you. I should say that not less than 3000 different men have been, more or less, in my employment during the before mentioned period, and that the number that could read and write intelligibly, was about one to eight. Independently of their natural endowments, those who could read and write, and had some knowledge of the first principles of arithmetic, have almost invariably manifested a readiness to apprehend what was required of them.

and skill in performing it, and have more readily and frequently devised new modes by which the same amount of work could be better done. Some of these men we have selected for superintendents, and they are now contractors."

These are specimens of facts that might be multiplied to any extent, showing that knowledge even in the possession of one who works for daily wages, is power; how it enables its possessor to command better wages, and to rise from step to step.

But the instances selected relate to employments that do not afford half the advantages to knowledge and mental activity that they enjoy upon a farm, where the employments are so much more various and the opportunities to make mind do half the work of muscle in some new way, so much more numerous.

The farmer has certain acres under his control, and certain means—his own hands and funds—that he can use in getting out of those acres a living. He can do something by going into his field as it is, with a sharp stick to prepare the soil for a crop. The question is, how much more he can do by dint of observing and thinking; how far, with those identical acres and hands and funds of his, he can make science and skill supply the place of more acres, more hands, more hours of labor. So bountiful is nature, that even ignorance and stupidity, with a few acres at command, can somehow procure daily bread; and much may be done by an active mind with a little attention to the gathered experience of many generations. But who can tell how much more may be accomplished by striving to understand the powers of nature and the ways and means within your reach whereby those powers may be made to serve you every hour and at every turn!

Rotation or Interchange of Crops.

Rotation of crops is to cultivate, successively, on the same field, crops of different kinds and of different habits, such as common grains, roots and grasses.

The necessity and utility of an interchange of crops has been ascertained by experience.

1. It was found that the growth of annual plants was rendered imperfect, by cultivating them on the same soil in successive years; and that a greater quantity of grain would be obtained to let it rest for a season, during which time it seemed to regain its original fertility.

2. It was also observed that some plants, such as peas, flax and clover, do not thrive well on the same soil until after several years; whilst others, such as tobacco, rye, oats and Indian corn, may be cultivated in close succession.

3. It was further ascertained by experience, that one class of plants *improve* the soil, a second *impo-*
verish it, while a third class *exhaust* it.

4. To keep up the fertility, manure has always been employed. But however much a soil may be manured, it is well established, that the produce of many plants diminishes, when cultivated for several years on the same soil.

5. But on the other hand, it is also fully settled, that when a field has become unfitted for one species

of grain, it is not therefore unfitted for another; but that a succession of plants will flourish well without the addition of a large quantity of manure; hence has arisen the modern system of rotation. It now becomes a question of the first importance whether these facts can be so explained, as to aid us in pointing out the best system of rotation. If we can fully ascertain the causes of the failure of the successive cultivation of the same crop, and of the favorable effects of rotation, we shall be provided with the best hints for constructing a proper system. These causes are to be found in the structure of plants, in their composition, and in the influence of the matters which they excrete by their roots.

1. *The structure of plants*, such as their roots, stalks and leaves, afford one important reason for the rotation of crops. Each family of plants have similar roots, leaves, etc. Their action upon the soil is therefore similar. The spindle roots, for example, like the carrot and beet, extend their roots deep into the soil, while the common grains lie near the surface. Clover and some of the grasses penetrate to a considerable depth, and branch out in all directions; hence, when one kind of crop is planted in the same soil for several successive years, the effect both mechanically and chemically is the same. Chaptal supposes that the roots exhaust only those portions of the soil which are in contact with them, and hence similar roots exhaust the soil in the same parts; but this effect could not take place when the land is plowed between each crop, though it might apply to trees. This theory is wholly set aside by the fact, that the roots form a galvanic battery with the soil; and, as in all galvanic circles, the matter would be transferred from some distance around, so that the plant could stand in no need of food, provided it were surrounded by substances, which will keep up with it, the vigor of the galvanic action.

In addition to the mechanical effect upon the soil, we would suggest whether similar roots may not form with the soil similar galvanic circles of similar power and mode of action, and that the interchange of crops changes this action or restores its activity. We know that different metals require different substances to excite the voltaic currents, and that rest or a change of materials will restore the action of a battery, when its power is exhausted. *The reason why some plants exhaust the soil more than others*, is partly due to their structure. In this respect plants are divided into three classes.

1. *The culmiferous plants*, so called from *culm*, the stalk, which is usually hollow and jointed in order to afford support both to the leaves and seeds. Wheat, barley, oats, rye, Indian corn, tobacco, cotton, flax, hemp and the grasses, are of this class. All of them, save some of the grasses, are termed *exhausters* of the soil, and in all cases exhaust it more during the ripening of the seeds than during any other period of their growth. Flax and hemp are the most exhausting crops, because their leaves are small, and hence but a small quantity of their substance can be obtained from the atmosphere. They also return but a small quantity of matter to the soil, in the form of stubble and roots.

The smaller grains rank next in their power of exhausting the soil, because their leaves are narrow and roots small. They, however, return more to the soil in the form of stubble.

Indian corn, tobacco and rice, have larger leaves, and derive more of their substance from the atmosphere. The culmiferous plants, being fibrous, do not penetrate and divide the soil so perfectly as those of the next family; and, on this account do not leave the soil in so good a condition for succeeding crops.

Von Thier has attempted to determine experimentally the different degrees in which different kinds of grain exhaust the soil. If wheat exhausts four degrees, rye will exhaust but three and a quarter degrees, barley but two and one fourth, and oats but one sixteenth degrees per bushel of the products.

2. *The leguminous plants*, such as peas, beans and other pulse, exhaust the soil much less than the preceding class, because their leaves are more numerous, and their stalks more vigorous. They are therefore able to derive more nourishment from the atmosphere, while their roots divide the soil more perfectly, and leave it in a better state for succeeding crops; hence they have been said to *improverish* the soil.

3. *Root crops*, such as potatoes, turnips, beets, carrots, onions, cabbages and clover, exhaust the soil less than either of the preceding classes, and are hence called *ameliorating crops*. This class are provided with large fleshy and porous leaves, by means of which they obtain a large portion of their nourishment from the atmosphere, in the form of ammonia, carbonic acid and water. As these plants are seldom cultivated for their seeds, they rarely mature them the first season; hence they derive but little nutriment from the soil. Their bulbous or tap roots divide the soil more perfectly, and prepare it for succeeding crops.

The reason why some plants *foul* the soil more than others is also due to their structure. Plants which have small leaves, permit the weeds to grow, and to appropriate to themselves the nutriment which belongs to the crop. They also exhaust the soil most, while plants with broad leaves cover up and prevent the weeds from growing, and these also exhaust the soil the least.—*Gray's Scientific and Practical Ag.*

AMERICAN APPLES. The London Sun says: 'The arrivals of apples from the United States of America are beyond precedent in extent, and the quality is remarkably fine. In several instances vessels arriving from New York have brought as many as one thousand packages of this fruit, of the excellent description of the Newton pippin.'

A stranger passing through one of the mountainous towns of New England, inquired, "What can you raise here?" The answer was, "Our land is rough and poor; we can raise but little produce, so we build school-houses and churches, and raise men."

DRAUGHT IN PLOWING. A Correspondent of the Farmer's Cabinet, very justly observes that farmers often commit a great error, in shortening the draught too much under the supposition that they lighten the exertion of the team. They may do so, with a cart,

or sled, the load being in part transferred to the horses' backs. But in plowing, "the plow must *set* so as to *swim*, without any tendency to rise or sink;"—this important object being attained, the length of chain is immaterial.

Guide in Buying a Horse.

A correspondent of the *Prairie Farmer*, contrary to old maxims, undertakes to judge the character of a horse by outward appearances, and offers the following suggestions, as the result of his close observation and long experience:—

If the color be light sorrel or chestnut, his feet, legs and face white, these are marks of kindness.

If he is broad and full between the eyes, he may be depended on as a horse of good sense, and capable of being trained to any thing.

As respects such horses, the more kindly you treat them, the better you will be treated in return. Nor will a horse of that description stand the whip if well fed.

If you want a safe horse, avoid one that is dish-faced; he may be so far gentle as not to scare, but he will have too much go-ahead in him to be safe for every body.

If you want a fool, but a horse of great bottom, get a deep bay, with not a white hair about him; if his face is a little dishd, so much the worse. Let no man ride such a horse who is not an adept in riding—they are always tricky and unsafe.

If you want a horse that will never give out, never buy a large overgrown one. A black horse cannot stand heat, not a white one cold.

If you want a gentle horse, get one with more or less white about him—the more the better. A spotted one is preferable. Many suppose that the parti-colored horses belonging to circuses, shows, &c., are selected for their oddity. But the selection thus made is on account of their great docility and gentleness.

TO KEEP BIRDS FROM FRUIT, &c. The following plan, which I discovered by accident, is, I think, perfectly efficacious. One of my servants having by chance broken a looking glass, it occurred to me that the broken pieces suspended by a string, so as to turn freely in every direction, would give the appearance of something moving about, which would alarm the birds. I accordingly tried the plan, and find that no bird, not even the most fool hardy of them (a nest of newly-fledged sparrows), dare come near. They had attacked my Peas. On suspending a few bits of the looking glass amongst them, the marauders left the place. The tom-tits attacked my Seckel pears, (which they term very partial to); a bit of looking glass suspended in front of the tree put a stop to the mischief. My grapes were next much damaged, before they were ripe, by thrashers and starlings; a piece of looking glass drove these away, and not a grape was touched afterwards. I have before tried many plans, but never found any so effectual as the above.—*Gord. Chronicle.*

Making Pork.

We copied in our last number a statement of the success of an individual for three successive years in making pork by a particular course of feeding. Here are several more cases from the news-papers, of similar and greater success.

Mr. W. H. Joy of Townsend, killed a pig in October, 6 months and 8 days old, weighing 302 lbs.

Philo Hatch of Woodstock, killed one 9 months and 6 days old, weighing 384 lbs.

F. B. Hall of Plainfield, one 7 months and 16 days old, weighing 365 lbs.

Mr. Abijah Wilson of——, one 5 months and 13 days old, weighing 393 lbs. [We suspect the age to be misprinted in this case.]

Mr. B. K. Baker of Williamsburg, Mass., one 8 months and 26 days old, weighing 390 lbs. Mr. S. Miller of the same town, one 10 days younger and weighing 365 lbs.

We might add many more instances of the like kind; but these are enough for our purpose. In regard to none of them do we know any thing of the feed and other treatment, or of the breed.

We mention the subject now as one [that would doubtless reward thorough investigation. In making pork, should the farmer fit his animals for the knife at 8 or 9 months old, or would it be more profitable to keep them a year, or a year and a half? Is it the fact, as some assert, that it requires more food according to weight of pork, to fatten an 8 months porker, than to fatten one 18 months old? What is the exact difference, in a word, in profit, between fattening the older and the younger animals? And what is the most profitable course of feeding?]

If our Agricultural Societies could get at the exact truth in regard to this matter, it would be an important service to the pork-makers of Vermont. We have not noticed that any of them have proposed premiums intended to bring out the necessary information.

As it is, who can tell whether Mr. Baker finds it profitable to make his pig weigh 390 lbs. before it is 9 months old, or not? Who can say with certainty, that it would not have been better to have kept the pig a year longer, and then to have brought him up to near twice the weight? If any of our readers are now prepared to decide such questions, we should be greatly obliged for their facts and reasonings.

Large Wheat Crop.

Alanson Nash of New York presented a paper on the culture of wheat, by his father in Hampshire county, Massachusetts, from which we make the following extracts.

"The soil on which the wheat was sown, a third of an acre, is formed from the decomposition of granite, mica slate and other primitive rocks. Great care was taken in washing the seed wheat in clear water, until nothing but pure seed was left—then about eight quarts of clean slaked lime were put into the hogshead containing the seed wheat, and well mixed and stirred in with the seed, and then the water added and stirred until at length the water ran off clear from the wheat.

The wheat then remained in the hogshead over night, and became swelled, almost ready to burst. Then ashes of oak, hickory and maple, the woods burned in the house, were well mixed with the wheat, until the seed was dry enough to handle, when it was immediately sown and harrowed in.

The seed so treated had been thoroughly tainted with smut, but as appeared by the crop was entirely eradicated. The straw was vigorous—did not lodge. The yield was eighteen bushels of best wheat. The manure applied was from under the stable, where cattle had been housed for several years and was thoroughly impregnated with urine.

Another experiment was tried with wheat on one acre sowed with the same wheat, but without manure. Indian corn had been grown on it the year before, manured with hog manure in the hills. The north half of the hill was sown with the *washed wheat as before*—the south half with the same wheat *unwashed*, and no lime, ashes or anything else. The result was that the straw and wheat on the north side were clean, fresh, the berry heavy and full. On the south side almost a total failure, not yielding more than ten bushels per acre.

Of the prepared wheat [swelled and with ashes] my father sowed at about the rate of six bushels per acre! —*Farmer and Mechanic.*

Decomposition of Manure in Soils.

The September number of the Long Island Farmer contained a Report of the New York Farmers' Club at Greenport, and the statements made in that Report in regard to manures have called forth the following remarks in the same paper, from Professor Norton of Yale College, whose literary and scientific acquisitions are so well known to the community:

"My attention has been called to this subject by the Report in your September number of a meeting of the New York Farmers' Club at Greenport. In that Report are some statements quite opposed to what has hitherto been considered true, of the decomposition of manures in the soil. If every particle of manure, as there stated, has an *upward tendency*, the practice of the best farmers in this and other countries has been entirely wrong. With all due deference to the gentlemen whose remarks are there reported, I must express the opinion that such an unqualified assertion is not advisable on this point.

In the first place, the fact seems to have been overlooked, that all manures contain inorganic substance, which is neither volatilized by heat, nor readily soluble in water; those which on some soils produce the greatest effect, are almost entirely inorganic. With regard to the organic part of manures, there can be no doubt that in certain cases a portion of the gases evolved during decomposition may escape. This would be peculiarly large during a dry season, when the evaporation is great and at the same time the progress of decomposition rapid. Ordinarily however, decomposition, in a substance covered by sufficient layer of earth to exclude the air almost entirely, goes on with exceeding slowness. This is not the case with large masses of animal or vegetable matter, but

applies in the case of manure, which is usually disseminated either in small fragments or powder through the whole soil. The evolution of gases from common manures is very gradual, so much so that in most seasons but little that is valuable would escape in any way, as all of the gases and soluble salts would enter into new combinations, or be taken up by the roots, before reaching the surface, or before descending beyond the reach of the plant. The quantity lost by evaporation would vary with the season; in a long continued drought much would come up from below. In some parts of South America, during the dry season, a saline incrustation is formed over the surface of the earth, left by the evaporation of water, which contained the salt matter in solution. On light, sandy soils, the tendency during dry weather would be to evaporation, of water, which contained the water descending from the surface.

Little can be drawn from the fact that grave-yards are sometimes very rich. So far as my observation extends, this is only the case in those very old yards, where the ground has been many times spaded over, and where the whole soil is filled in consequence, with decaying animal and vegetable matter. I have known instances of burial grounds of several hundred years standing, which showed no symptoms of special richness. At the depth to which graves are generally dug, decomposition is slow; and it is not likely that much of the gas evolved ever reaches the surface; it is more likely to be absorbed by water and descend to the nearest level.

Fish is a species of manure which becomes putrescent with great rapidity, and if only covered by a slight layer of earth, it is certainly probable that much of its value would escape upward in dry weather; it might therefore be advisable to cover it a little more effectually than common manure. It is the practice in Scotland to 'make a compost of fish, covering the heap thoroughly with earth. This compost is especially adapted to light sandy soil, because the plant finds its nourishment immediately, without waiting for decomposition, which decomposition in such soils is always accompanied by a loss in one direction or the other.

I think that in this climate, where droughts are unfrequent, the general tendency of manures is to sink rather than to rise, on all lands where the outlet of water is beneath the surface.

It is well known that in many cases, the surface-soil becomes exhausted, so as to bear very miserable crops, while the subsoil is rich. I have seen analyses of a soil and subsoil from a field where lime had been heavily applied for many years; the subsoil contained the greatest quantity of lime, showing indisputably that the lime had sunk. It is said that whole districts in Virginia, where the surface soil was long since exhausted by continued tobacco-cropping, may be at once renovated by deep plowing. If every particle, or if a large portion of the fertilizing ingredients of the soil rose, these things could not be. Instances might be multiplied, but these are probably sufficient.

I have not the pleasure of a personal acquaintance with either of the gentlemen who are mentioned in

your report, but trust that these remarks on a subject so interesting to the farmer, may be received as they are meant, for an effort to arrive at truth.

J. P. NORTON.

Analytical Library, Yale College.

Learning to Back.

If you would have your cattle learn this art, put them to an empty cart and let them back it down hill. Never pound their noses, for this gives them pain and wens, and makes them hold their heads down to avoid your blows. In such a position of the head the ox has no power over the yoke, for his throat is brought to bear on the lower part of the bow, and he cannot do much if he would.

By all means keep his head up, and then the yoke itself will bear against the upper side of the neck—the tough side—and against the horns. If you use a stick or whip, touch the fore legs with it; keep your stick under, and your steers will not put their heads down to come in the way of it. At first they will refuse to walk backwards, and will straddle away from the cart tongue in order to go sideways, and see where they are to step.

But while the cart is drawing them back, it will be your principal business to keep the steers in time that they may track after the cart. Be patient now, the cart is helping you, and the steers will soon choose to go backwards after the cart, rather than to stand still and hold it. In a short time your steers will learn to step backwards and keep their bodies close to the tongue, with their heads up. Soon you will teach them to run an empty cart back on level ground; and eventually your cattle will run back any decent load with nearly as much ease as they will draw it forward.

Mr. Jonathan Rice, of Marlboro', recently told us he taught his steers to back by hitching them to a rock in front of them, and then inviting them to back away from the rock, making them haul it after them, and endeavor to avoid it as it comes along. He says they will hold up their heads and pull stoutly to get away from their load in front. We have no doubt this is a good mode of using cattle to run a load back.—*Mass. Ploughman.*

From the Ohio Cultivator.

How to raise good Potatoes.

My object in writing at this time is to give to you my method of growing potatoes free from the rot. I have practiced it two seasons with entire success, and have now 600 bushels of fine Mercer potatoes in my cellar, all free from the disease.

My method is, to plow the ground late in the fall or early in the spring, harrow it smoothly before planting time, then haul out say 15 tons rotted manure, spread it broadcast, then take two horses and a plow, and back up two full furrows, the furrows just meeting in the backing; leave a strip one foot wide, and back up two more—and so continue till you have completed the lot. Then turn about and split these double furrows open with a single furrow, then commence dropping your potatoes, (pieces of cut potatoes, con-

taining at least four eyes) in the furrows six inches apart. After the lot is dropped, take your horses and plow and throw two good furrows—one round of the team to a row—just meeting on the top: dress off the top, clearing the row of stones, clods, &c.; then sow broadcast five bushels common salt over the ground immediately after planting; cultivate well till the plants are in blossom and you will have a good crop; never cultivate potatoes when in blossom.

When the crop is ready to gather, clear the ground, take your horses and plow, turn a furrow from each side of the row; let a boy pick up the scattering potatoes, then turn out the row, pick up the potatoes; then hoe down the ridge—lastly barrow over the ground, pick up the remaining potatoes, and the work is finished. The agriculturist must at once observe that by this process, he gets a broad loose bed for the potatoes to grow in, also double depth of soil; then you are certain of good dry potatoes. I would here observe, that potatoe ground is the very best for producing a good crop of wheat; and I would advise farmers to grow a greater surplus of this most valuable root. If there is no market, store them, and feed them to your horses, cattle, and hogs; feed them in your stable through the winter; give your stock good bedding; clean out your stables once a week; make as large a manure heap as possible; and you will not be troubled with the potatoe disease, nor that worse malady, arising from always taking out of the meal tub and never returning any; you will thus come to the bottom.

Respectfully, T. A. D.

Columbiana county, Ohio.

From the Farmer and Mechanic.

Fine Wool.

The history of this inestimable production always proves interesting to those public spirited men who love (and labor in) the cause of human welfare.—Some such individuals in Scotland, more than a century ago, had with great expense and care carried out the theory, that fine wool is the product of the sheep when reared on cold and almost barren mountains. They had reared a breed of sheep there whose fleeces were almost as fine as the famous ancient product of Coraxi, two thousand years ago. About the beginning of the war of 1756, the magistrates of a considerable town in the north of Scotland, famous for its manufacture of worsted stockings, desirous of expressing the esteem which they bore for their countryman *Marshal Keith*, resolved to present him a pair of stockings of their own manufacture, of uncommon fineness. With that view they commissioned a person to purchase in London, some of the finest wool that could possibly be found, without any limitation as to the price. In consequence, some pounds of the very finest Spanish wool which could be picked out by the best judges were sent to them. When it arrived, the magistrates sent for the women who were to manufacture it, and having told them what they wanted, showed them the wool they had got for that purpose. But the women, when they had examined, complained of its quality; saying that it was too coarse, that they could not undertake to draw above *forty heers* (a heere

is a thread 600 yards long,) from one pound of it.—But they said that if the magistrates would wait till the *Highland* wool came to their market in the month of June, they would there pick out wool for themselves, and would undertake to spin from it *seventy heers* to the pound. As they were unanimous in this declaration, the magistrates agreed to wait. The stockings were made of the *Highland* wool, and were valued at *five guineas the pair*—and were easily drawn together through an ordinary thumb ring, although they were of the largest size. These stockings were sent in a box of curious workmanship, to *Marshal Keith*, who deemed them worthy of the acceptance of the *Empress of Russia*, to whom he presented them. In the year 1710 worsted stockings were made at *Aberdeen* from *Highland* wool, valued at thirty shillings a pair, and sometimes for three pounds sterling (\$17 50) a pair. In 1733 similar stockings were sold in *Aberdeen* for \$27 50 a pair. And the *Highland* wool has been spun to the extent of more than sixty thousand (about 34 miles) yards from one pound. Three pairs of gloves made of this yarn were bought by *Lady Mary Drummond*, one of the *Duke of Perth's* family, at *three guineas a pair*.

In *Armenia*, the fine wool raised on the cold mountains dividing it from *Thibet*, was made into *chales* (shawls) being cloths of about a yard and a half long, several hundred years ago.

H. MAZES,

Secretary Farmers' Club.

Prices of Produce.

We are informed that many of the farmers are unwilling to sell their produce at present prices, but are holding on for higher. We fear that all those who entertain such expectations may be disappointed. It will be recollected that the crops of grain in the year 1846, were short in Great Britain, Ireland, France, Germany, the Netherlands, and some other parts of Europe; while the potato crop, the great dependence of the most numerous class of people in these countries, was more than half destroyed. This year the grain crop is abundant in all parts of Europe, and the potato crop pretty good in every country save Ireland. The wants of the people, consequently will not be near so great as they were last year; neither are they so able to pay; for famine and disease, in many cases, have nearly or quite exhausted their means. Nevertheless, the United Kingdom would take a considerable quantity of produce from this country, if it could be had at a moderate price. But for the past six months, most articles of produce have been nearly as high here as in great Britain. The result is, it cannot be shipped from this country just now, with a prospect of remunerating the produce merchants, and the English people are looking to Southern Russia, Egypt, Italy, Spain, and Germany for the supply of their wants; thus the farmers of the United States are daily losing sales which they may hereafter deeply regret.

It is well known that the crop of corn throughout our country was full one-third larger in 1847 than was ever before known; and other crops were an average; we may therefore look for large arrivals of produce, at every commercial depot on the seaboard, as soon as

navigation opens in the spring. Let the farmers of the Atlantic states think of this, and be advised to sell now while they can get good prices, and they have no competitors to contend against in their own market, or abroad. Great Britain will purchase largely of them, if they will consent at once to sell at such prices as will not make the business too hazardous for the merchants to embark in it.

The breadstuffs alone, to say nothing of beef, pork, lard, butter, and cheese, exported from the United States, ending the fiscal year on the 30th of June, 1846, amounted to \$15,987,186; in 1847, to \$51,664,475, making the enormous increase in a single year, of \$35,677,289! The largest share of this immense sum has gone into the pockets of the farmers, and if they will act judiciously in the sale of their products, they may realize an equally large amount the present year as they did in 1847. Quick sales at moderate profits we have always found to be the best.—*Am. Agriculturist.*

TEN PLAIN RULES FOR OBSERVATION IN PRACTICAL LIFE.

1. Never put off till to-morrow, what you can do to day.
2. Never trouble another for what you can do yourself.
3. Never spend your money before you have it.
4. Never buy what you do not want because it is cheap.
5. Pride costs us more than hunger, thirst and cold.
6. We never repent having eaten too little.
7. Nothing is troublesome that we do willingly.
8. How much pain have those evils cost us which have never happened.
9. Take things always by their smooth handle.
10. When angry, count ten before you speak; if very angry, a hundred, or repeat the Lord's prayer.

The Markets.

BRIGHTON MARKET, Thursday, January 20.

At market, 590 Beef Cattle, 30 Stores, 2450 Sheep, and 245 Swine. 110 Beef Cattle and two lots Sheep unsold.
Prices. *Beef Cattle*—We quote extra, \$6.75; first quality, \$6.00 a 6 50; second, \$5.25 a 5 75; third, \$4.75 a 5 25.
Working Oxen—Sales at \$35, 82, and 90.
Cows and Calves—Sales at \$24, 28, and 32.
Sheep—Sales at \$1.50, 1.88, and 2.25. *Wethers*, \$4, 4.75, 5, and 5.50.
Swine—Lots to peddle, at 43-4 and 53-4c. At retail, from 6 to 7c.—*Advertiser.*

NEW YORK CATTLE MARKET, Jan. 24.

At market, 1200 Beef Cattle, 1500 Sheep and Lambs.
Prices. *Beef Cattle*—More animation than last week, and with a good request, prices have recovered all that they had lost; no cattle of any account selling at a lower price than \$6 per cwt, while the average is from that up to \$8.50;—about 300 head unsold; supplies from the South 375—remainder New York and Connecticut cattle.
Sheep and Lambs—Market better supplied and prices fully equal to last quotation; sales at \$1.75 a 3 25 a 6 50; this last is a higher price than for several months past. All sold.—*Journal of Commerce.*

New-York, Jan. 25, P. M. Ashes—Pots firm at \$6 and Pearls steady at \$7. Flour—A steady demand for export at \$6, and occasionally at 6 06, but beyond this shippers will not take hold; pure Genesee will command 6 25 a 6 37.

Jan. 25, 2 P. M. Flour market is stagnant; no marked change in prices. Sales of Genesee at \$6.06 a 6 12½. The

market for Corn is dull. Sales of new mixed at 64 a 66c; and old 70c per bushel.

ALBANY, Jan. 25, P. M. Flour—Market dull to-day, with a tendency to a further decline. Sales to the trade and on eastern account at \$5.87½ a 6 for Western, and \$6 a 6 12½ for Genesee; mixed Western offered at \$5.75, without sales.—*Grain*—Market dull; not much disposition evinced by dealers to purchase at present rates. Pork, in the hog, is firm at \$6.25 a 6 50 for good lots in the street.

Boston, Jan. 27. Flour—Genesee best common, dull at \$6.50. Southern Corn 66 to 71c. Rye 95c; Oats 52c. White Beans \$1.50 to 1.75. Butter 12 to 22c. Cheese 5 to 8c. Pork—whole hogs, 7 a 7½. Lard 8 to 8½c. Sugar, Havana Brown, 5 to 7c; Molasses, New-Orleans, 27 to 29c.—Coffee, Java, 8 to 11c.

Wool—without change.

Prime Saxony Fleeces, wash'd, lb.	45	a	50
American full blood,	do	40	a 45
do 3-4	do	35	a 38
do 1-2	do	31	a 33
do 1-4 and com.	do	28	a 31
Smyrna, Sheep,	do	15	a 20
do unwashed,	8	a	13
Buenos Ayres, unpicked,	6	a	14
Extra Northern pulled lamb,	38	a	40
Super.	do	do	35 a 36
No. 1	do	do	30 a 32
2	do	do	20 a 22
3	do	do	14 a 15

LIVERPOOL ANNUAL PROVISION MARKET.

As usual at the close of the year, we give a comparative statement of the imports and stocks of Beef, Pork, Bacon, Cheese and Lard.

Our supply of Beef during the past year has been much short of that received in 1846; prices, consequently, have ruled high, which has apparently checked the consumption, as, with a much lighter import, the stock remaining (of which about half is new) is nearly equal to that left at the close of last year. Since our last report there has been a fair inquiry for the article at the quotations; but, with increased supplies, lower rates must be looked for.

The import of Pork has been about double that of 1846, and nearly four times as great as in 1845. In the first six months of the year there was an active demand for Ireland, but with the pressure for money this demand almost ceased, and since the sales to all parts have been very limited.—Since the 17th inst., about 350 barrels have been taken for export, and for a choice article of prime meat for ship stores there is some inquiry; but we again quote lower prices for middling and inferior qualities.

American Bacon was last year, for the first time, an article of considerable importance, an import of about 5,000,000 pounds having been received and nearly all disposed of. A large proportion of the Eastern cure was of very choice quality, sold readily at highly-remunerative prices, and gave great satisfaction to the consumer; but, with a few exceptions, the Western cure was, in all respects, the reverse, being hastily and roughly cut, imperfectly cured, and turned out of hand in a slovenly manner, in addition to which much that was shipped at New-Orleans in large vessels with corn cargoes arrived quite out of condition, and the result has been most unsatisfactory to all concerned, sellers and consumers. For the stock now on hand, which is nearly altogether Western cure, the demand has rather improved since our last, and we expect all will now sell at about present rates.

Of Hams and Shoulders there was also a large import; those received early in the season in good condition sold readily at paying prices, but the late arrivals being nearly all out of condition, the result has been most unprofitable. With care and attention to quality, both articles can be sold here to a considerable extent.

There has been a steady sale in Cheese throughout the past twelve months, and the price has ruled high until within a short time. At no period since the commencement of 1847 has the stock been in excess, and with the present reasonable prices there is a steady consumption going on. The sales for a few days past, owing to the holidays, have been rather sluggish; there is, however, no great assortment in the market.

The range of prices for Lard has been from 46s to 60s, the average figures being 50s to 53. There has been a steady demand throughout the year. A considerable portion of the import has been remelted and refined here, the process making it almost equal to Irish. The stock in hand is light, and all imports meet a ready sale.

Very little Butter from the United States has found its way here this month. Of Canadian there has been about the usual quantity, the quality of which, we note with pleasure, is much improved.—*Liverpool Times.*

TANSY UNDER FRUIT TREES. Many years since we read in an agricultural publication that tansy, set under fruit trees, would prevent the mildew. The experiment was tried, and the disease, or insect, whichever it was, disappeared; and since that time, the trees so protected, have remained in excellent health, and have uniformly produced an abundance of excellent fruits.—*Olive Branch.*

Domestic Economy.

HOUSEHOLD WEIGHTS AND MEASURES.

Wheat Flour—1 pound is 1 quart.
Indian Meal—1 pound 2 ounces is 1 quart.
Butter, when soft—1 pound 1 ounce is 1 quart.
Loaf-sugar, broken—1 pound is 1 quart.
White Sugar, powdered—1 pound 1 ounce is 1 quart.
Best brown Sugar—1 pound 2 ounces is 1 quart.
Eggs—average size, 10 eggs are 1 pound.

LIQUID MEASURE.

Sixteen large table-spoonfulls are $\frac{1}{2}$ a pint.
Eight table-spoonfulls are 1 gill.
Four large table-spoonfulls are $\frac{1}{2}$ a gill.
A common-sized tumbler holds $\frac{1}{2}$ a pint.
A common-sized wine-glass holds $\frac{1}{4}$ a gill.

[Dr. Browne.]

REMEDY AGAINST MOTHS.

It is an old custom with some housewives to throw into their drawers every year, a number of fir-cones, under the idea that their strong resinous smell might keep away the moth. Now, as the odor of these cones is due to turpentine, it occurred to Reaumur to try the effect of this volatile liquid. He rubbed one side of a piece of cloth with turpentine, and put some moths on the other; the next morning they were all dead, and, strange to say, they had all voluntarily abandoned their sheaths. On smearing some paper slightly with the oil, and putting this into a bottle with some of the grubs, the weakest were immediately killed; the most vigorous struggled violently for two or three hours, quitted their sheaths and died in convulsions. It was soon abundantly evident that the vapor of oil or spirits of turpentine acts as a terrible poison to the grubs. Perhaps it may be said that even this remedy is worse than the disease, but, as Reaumur justly observes, we keep away from a newly painted room, or leave off for a few days a coat from which stains have been removed by turpentine, why therefore can we not once a year keep away a day or two from rooms that have been fumigated with turpentine?

It is, however, surprising how small a quantity of turpentine is required; a small piece of paper or lichen just moistened therewith and put into the wardrobe or drawer a single day, two or three times a year, is a sufficient preservation against moths. A small quantity of turpentine dissolved in a little spirits of wine (the vapor of which is also fatal to the moth) will entirely remove the offensive odor, and yet be a preservative.

The vapor of turpentine is also effectual in driving away spiders, ants, earwigs, bugs and fleas. The

latter tormentors are so abundant on the continent, as frequently to deprive the weary traveler of his night's rest. If he would provide himself with a phial, containing turpentine and spirits of wine in equal parts, and would sprinkle a few drops over the sheets and coverlid before retiring to rest, he would probably have reason to be grateful for the hint.—*Sharpe's London Magazine.*

BEEF. When intended to be eaten fresh, "the ribs will keep the best, and with care will keep 5 or 6 days in summer, and in winter 10 days. The middle of the loin is the next best, and the rump the next. The round will not keep long, unless salted. The brisket is the worst, and will not keep longer than 3 days in summer, and a week in winter."* In cooking, a piece of beef, consisting of four of the largest ribs, and weighing 11 lbs. 1 oz., was subjected to roasting by Mr. Donovan, and it lost during the process 2 lbs. 6 oz., of which 10 oz. were fat, and 1 lb. 12 oz. water dissipated by evaporation. On dissection, the bone weighed 16 oz., so that the weight of meat fit for the table was only 7 lbs. 11 oz. out of 11 lbs. 1 oz. It appears that when the butchers' price of ribs is 84d. per lb., the cost of the meat when duly roasted is 114d. per lb., and the average loss arising from liquefaction of fat and evaporation of water is 18 per cent. With sirloins, at the price of 84d. per lb., the meat cost, when roasted, is 14d. per lb., at a loss of 20 $\frac{1}{2}$ per cent. A loss of 18 per cent. was also sustained on boiling salted briskets; and on salted flanks, at 6d. per lb. the meat cost 73d per lb., at a loss of 13 $\frac{1}{2}$ per cent.—*Book of the Farm.*

* The Experienced Butcher.

† Donovan's Domestic Economy, vol. ii.

CHAPPED HANDS. To prevent the chapping of hands after the use of soap, in the summer the oily property of the perspiration answers the purpose; but in the winter, a very little vinegar or cream being rubbed on the dried hands after the use of soap, will completely neutralize its alkaline properties and thereby effectually prevent the chapping of the hands. Any other acid or oily substance will answer the purpose. This is worthy of a trial, as the sufferings of man from chapped hands are exceedingly painful and troublesome.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy,	- - - - -	50 cents.
5 copies, sent to one address,	- - - - -	3 00
10 " " " " "	- - - - -	3 00
16 " " " " "	- - - - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. I.

WINDSOR, VT., MARCH, 1848.

No. 11.

THE SCHOOL JOURNAL.

IF An important article from the State Superintendent, which was promised in his Annual Report, appears in this number. Our next will contain a paper from the same source, and of still greater importance to many of our readers, on the *Examination of Teachers*.

For the School Journal.

Reports from the Summer Schools.

MESSENGERS EDITORS: In my last annual report as Superintendent of Schools, I stated that a number of reports of the last summer's schools had come into my hands, which could not be embraced in that report. But I proposed to examine them at some future day, and give the results to the public through the School Journal; and I now proceed to redeem that pledge.

It will be understood that these reports were received in advance of the period when it might be expected that the reports of the summer schools would be generally received; and probably the next annual report will embrace those now in my hands, in connection with others that have not yet reached me. But it was supposed that it might be interesting to learn, in advance, the results exhibited by those already received.

These reports are 312 in number, and were received from the following Counties: From Bennington, 69; Caledonia, 56; Lamoille, 38; Orange, 54; Windham, 59; and from Rutland and other counties, 36.

It must, however, be remarked that these reports do not probably afford a correct index of the results in our schools generally. Unfavorable as the results they exhibit, in some respects, are, they are yet believed to be more favorable than would be presented by complete returns from all the schools in the state, —as a large proportion of those received appear on their face to come from the better class of districts.

The average length of the 312 schools reported was 76 days; ranging from 70 days for those in Windham County, to 85 for those in Bennington. The whole number of scholars that attended these schools was 8258; being a fraction over 26 scholars to each school. The average daily attendance was 5212; being an average of about 17 scholars to each school. Or stating this result in another form—these 8258 scholars attended school on an average a little over 47 days each; making an average of nearly 29 days to each school lost directly by irregularity of attendance.

It was anticipated that our summer schools would

exhibit a greater irregularity in the attendance than our winter schools, because many boys from 10 to 14 years old, that attend school in the early part of summer, are employed upon the farm during the season of haying and harvesting. But the disparity is greater than was anticipated, and is not to be attributed wholly to the fact just stated. Of the winter schools, 23 days out of 70, were directly lost by irregular attendance; and of the summer schools 29 days out of 76—so that the additional 6 days in the length of the summer schools was wholly wasted and lost by increased irregularity of attendance.

But if these schools had been kept for only 38 days each, instead of 76, and those 8258 scholars had attended for that term of time uniformly and constantly—so as to have avoided all the embarrassments and hindrances of irregular attendance,—we must believe the aggregate benefit would have been greater than that derived from this average attendance of 47 days, at different and uncertain periods. Let us then estimate the amount of the *pecuniary* loss. Assuming that in the 2650 (or more) districts in the State there were 2500 schools taught for an average term of 76 days, and estimating the board of teachers at \$1,00 per week, and their wages at \$4,50 per month, the expense of the summer schools for these two items was about \$33,81 to each school; or upwards of \$82,000 for the 2500 schools. Allowing then that half this sum was wasted, every one can figure for himself what it amounts to—and every one ought also to be able to answer the inquiry whether it was good economy for the State to throw that sum away in a single summer.

The average age of the 312 teachers whose reports have been received, is 19.3 years; being three years less than the average age of teachers for the previous winter. This result was in some measure anticipated, as it is known that females ordinarily commence teaching at an earlier age than males. The number of seasons taught by these 312 teachers averages 3.7 each—being just one season less than the average for the teachers of the winter schools. Assuming that one third of the number—which is about the usual proportion of females employed in the winter schools—had taught both summer and winter, it would appear that the average age at which our females commence teaching is about 17 years. This is at best a somewhat early period in life to undertake the responsible work of training the youthful mind and heart. But as the minds of females are generally about as well matured at that age as those of males are at 20, and as females are very likely to engage in *more exclusive du-*

ties when a *suitable offer* is made them, it is doubtless well that they should be employed in the common school at as early a period as they can be suitably prepared for it. And if they will make the right effort to secure this preparation, perhaps we should not complain of their entering upon the work at so early an age as 17 years.

The belief was expressed in my last annual report, that the average wages of teachers of summer schools would be found not to exceed \$4.50 per month.—The average, however, for the 312 whose reports are received, is \$4.84 per month—ranging from \$5.40 in Bennington county to \$4.38 in Caledonia. Leaving out Bennington and Windham counties, which may have been somewhat beneficially influenced by their proximity to a State in which a higher estimate is placed upon the value of the teacher's services, the average wages paid in the remaining 184 districts was \$4.51 per month. But it has been already stated that the returns appear to be from a class of districts better than the average for the State—larger, wealthier, and probably paying higher wages. And the belief is still entertained, that the average for the whole State, if fully and fairly ascertained, would not much exceed \$4.50 per month.

But a difference of 34 cents per month in the wages of a teacher is too small a matter to spend words upon. Be the average \$4.50, or \$4.84, the fact is, in either case, a humiliating one. So meagre a compensation is unjust—grossly and monstrously unjust—not merely to the teachers themselves, but to our children. Can the female afford to incur the expense necessary to secure the proper fitness for the employment of teaching, when the only pecuniary privilege(!) to which it can admit her is that of obtaining, for three or four months in the year, or perchance for six or seven, less than half the monthly wages obtained in other pursuits which afford constant employment? Can she, on the promise of so inadequate a return for her expenditures, procure the necessary books, and avail herself of those other means of instruction and improvement which are requisite if she would perform well her delicate, difficult, and responsible work? Can she afford to attend the Normal School, or the Teachers' Institute, where she may be guided into higher and brighter fields of thought—where visions of greater excellence shall be presented before her, and where she may learn how to lure and guide the subjects of her educational charge along the radiant path of knowledge into those same bright regions into which she has herself been led? Is it not a miserable encouragement that she has to make an effort to fit herself for a laborious and anxious employment, so long as she knows that when prepared to enter upon it, her terms of compensation, however *unreasonably* "reasonable" they may already be, must still be "beat down"—that committees will even haggle and stickle about the difference of a "York shilling" per week? Might she not well be disheartened, and shrink from such a practical illustration of the idea that there is

"Beneath the lowest depths
A deeper still!"

The male teacher is beat down by the dollar; but

with the female, the reductive process must extend to the ninenpence and the sixpence. A case came within my knowledge, the last summer, in which a young lady who might fairly be ranked as a first rate teacher, was applied to to teach a school of some fifty or more scholars. Her terms were \$1.50 per week. But the committee believed—honestly I doubt not—that the district would not justify them in paying so high wages; and she was finally obliged to come down to "eight and three pence"! Even then the committee felt some misgiving, lest they should be censured for having paid too high. But perhaps the district were tolerably well satisfied, on the ground that, even as things were, the teacher had been "got down ninenpence a week." The aggregate value of the property in this district could not probably be estimated at less than \$60,000.

Now this is not related as an unparalleled occurrence—but on the contrary as a common specimen—if not a very *fair* one—of every summer's transactions. It is a mirror in which it is apprehended that very many districts in the State might see some features in their own history pretty distinctly reflected. How many districts, last summer, beat down their teacher from one dollar to "five and three pence" per week? How many from five shillings to "four and six"? How many—but for the credit of the State, if not for compassion's sake, we will forbear to ask any more questions.

But this subject cannot be presented in so clear a light as it should be, without showing more fully and definitely than the proper limits of this paper will permit, how much more lucrative other employments are than teaching—and how much expense at the same time needs to be incurred in order to secure the desirable qualifications for this latter service—in connection with the fact that an able discharge of its duties requires the highest grade of talents, and that it is a work which involves the most weighty responsibility of any human employment. But it is believed that all, from their own observation, may see and know at least so much as this—that the female can have, under the present state of things, no inducement, drawn from the hope of a fair pecuniary recompense, to make any effort to fit herself properly for the employment of teaching. And we cannot expect, nor would it be reasonable to require, that pure self-sacrificing motives should so far supply the place of all others, as that our children should not, in the result, suffer through a deficiency in the qualifications of their teachers. If we are not ourselves ready to do justice for the benefit of our children, it would come with an ill grace from us to complain that others will not become martyrs for their sakes. If we grudge a pittance of our ample means to provide food for their minds and souls, let us not complain that a devoted few, out of pure benevolence, will not sacrifice their all to furnish it.

But on the other hand, let it be generally understood that the good teacher's worth is appreciated, and that the services of such an one would be secured, if possible, at almost any cost—then those possessing the requisite talents, with a natural adaptability to the employment, encouraged by the hope of

receiving an adequate reward for their labors, would prepare for this noblest work—aspiring to that higher excellence which we would so gladly see them attain. We might then hope to find, prepared to our hands, those to whom we might securely commit the moulding of our children's characters and the guiding of their immortal spirits—confidently trusting that they would be led steadily along, in the pleasant paths of truth and wisdom, into those fields of higher and nobler culture, where elevated thoughts, pure purposes, and holy aspirations dwell.

H. EATON.

Enosburgh, Feb., 1848.

For the School Journal.

School Government.

[Read by Rev. H. O. HIGLEY, of Castleton, before a Convention of Teachers and others, held at Poultney, Jan. —, 1848.]

Where can there be order without government? The very elements of the world are subject to government—the incessant control of established laws. Suspend these laws, or let an interregnum come upon the materials which compose this earth and ourselves; and what desolation, what confusion and chaos would ensue! Deplorable disorder and unprofitable trouble are always consequent upon no-government. In civil matters, any government—absolute monarchy or pure democracy—is better than none. In social life, how can there be a family without discord and wretchedness, unless there be in one member authority, and in the others obedience, or in all, obedience to fixed principles? So of a school, what instruction or study can there be in it, if there be no government—that by which the active limbs and lively minds of the children shall be regulated, and some degree of order maintained among them? "Order is heaven's first law," saith the poet; and most obviously this law must be understood and observed in the school-room, or no useful education will be found there.

But not to dwell on the necessity of order and of government for the sake of order, I propose, for the sake of order, in my few remarks to notice the difficulties in the way of good school government, and then show my opinion as to what is required for the attainment of it.

Sometimes the great difficulty is in the teacher; and results from inexperience, or bad early training, or erroneous views of school government. The common remark, that a young person is likely to keep as good a school the first season as ever afterwards, may be verified in some rare cases; but they are—at least ought to be—exceedingly rare. Experience is, or would be, an important aid of every faithful school teacher; and in no part of his task more than in governing his school. Not all well qualified instructors can use the same means with the same results. Some can control by the sweet tones of affection and words of persuasion much more than others can. Some can produce much more effect than others by a severe and piercing look. Some can govern well without appearing to govern at all; while others, in order to govern at all, must assert and maintain a pedagogical authority vis-

ible through the whole district. Diversities of gifts in the teachers, require some diversity in the manner of maintaining order in their schools. And no other guide is equal to *experience* for showing them what methods of governing are best adapted to their peculiar talents.

Again, every one, that is not accustomed to self-government, is sadly disqualified to rule over the little subjects of a district school. Let the teacher's reason be once dethroned and passion bear the sway in the presence of his pupils, and they will ever after doubt his right to exercise authority over them. In consequence of such a misdemeanor, they will more reluctantly comply with his demands. A teacher irritated and inflicting punishment in *anger*? Who will unfold the school that they may not see it and spurn his control!

And further, if he mistakes the object of the school—if he makes government and order *the end*, instead of *means* to an end—if he thinks the exercise of authority his principal business, he will not govern well, besides failing altogether in making his school a delightful resort for lovers of learning. His pupils will be apt to think that their main business is to dodge or resist his control; and ten to one they will keep him fully occupied in his objectless governing.

The variety of training to which the children are accustomed at home, constitutes another difficulty in governing the district school. Some are from families in which subordination is thorough, and obedience prompt and cheerful; others from homes where insubordination and misrule and turbulent passions are daily exhibited; and others from under an unsteady authority, now mild, then severe—now strict, anon lax. It must be difficult to subject the subjects of so different domestic discipline to the same school discipline.

Another difficulty has sometimes arisen from the foolish interference of some parents whose indulged and spoiled child has been visited with a merited chastisement. But we are happy to believe that less trouble springs from this source now than formerly. Let well qualified instructors be more generally employed, and their employers will with fewer exceptions sustain, instead of hindering, necessary discipline.

But enough of the difficulties. Come we now to inquire, by what means can they be overcome, and the district school-room present a scene of lively interest in the pursuit of useful knowledge—not being, as sometimes it has been, a theatre of tyranny, or of anarchy. And here I will venture a word about that much mooted question,—Is it proper that the rod should ever be used in school? I am not of those who discard corporal punishment in all cases. But I would that it should be the "*corps de reserve*"—seldom called out. The whip, or feroe, need not be,—ought not to be—the main reliance for preserving order in the school. A gentleman or lady, of enlightened views and kind feelings, and endowed with a little more common sense than is common any where, will *study*—will rack the invention and task the best energies of the mind—to make the exercises of the school as *interesting* as possible to the scholars; for

the more they are engaged and interested in their lessons, the less punishment or government will be required. Let a teacher employ his skill and exercise his care principally to keep all the scholars awake to the business of acquiring knowledge, and according to his success in these efforts will be the ease of keeping good order. I have occasionally felt my sympathies not a little stirred at seeing children four or five years old required to sit near together and wide awake, yet with nothing to do. The wonder is not that instances of disobedience to such commands should be frequent, but that there should be any examples of obedience. It is about as unreasonable to require such statue-like stillness in such circumstances, as to require the whole school to sit an hour without breathing. If living animals must breathe, lively children must do something more than breathe while they are awake. To govern a school well, then, the government must be made easy by keeping all the school pleasantly occupied in learning something useful. Except in some cases as a punishment, a pupil, and especially one of the youngest, should never be required to sit still doing nothing. As means of order and government no less than of instruction, every school-room should have an assortment of furniture, as sliding-balls, blocks of various geometrical figures, and outline maps; also if possible an orrery, or at least a globe. A supply of such things would, to a great extent, supersede the use of whips; and be more pleasant as well as instructive.

Another means of making government easy is neatness, comfort, and wholesomeness in the schoolroom. Where there is a great deficiency of these things, both scholars and teacher will be more restless, impatient, and passionate.

But with all the advantages of most favorable outward circumstances, and the best directed efforts of a kind and judicious teacher, the exercise of authority will sometimes be demanded, and *sometimes* the infliction of punishment. This should always be as light, and especially as little disgraceful, as possible, and reach the end of repressing disorder and constraining compliance to wholesome rules.

Habitually respectful treatment from the teacher has a benign influence on the school in regard to discipline. Some celebrated sage has said that no one is fit to have the control of small children who does not regard them with profound reverence. What would such an one think if he should hear a professed Teacher dealing out to one and another in the school such epithets and commands as these: 'Bill, don't you let me catch you whispering again, you roguish villain, if you know what is good for yourself.' 'Hore Nel., you little mischief, set down here and don't you stir again till school is out.' Now all such scolding is a serious injury to every child accustomed to hear it. That which he is most sure to learn under it is refractoriness. There ought to be nothing that approximates towards it. On the other hand, treat them with respect, and thus cultivate in them a high degree of self respect; and then ordinarily they will almost govern themselves. A gentle sway of the teacher will be sufficient to preserve good order. Even the

youngest in school should not always be addressed in the dictatorial form of command, but often in the way of familiar friendly conversation. Many teachers err in always taking upon themselves to decide what is right and what wrong; whereas the conscience of the scholar should be often appealed to—his mind be exercised to discern good and evil—and he be led to pass sentence on the moral character of his own acts.

It may not be useless here to say a word about the place which the teacher occupies in the school-room. He will not, of course, be stationary, fastened in one spot like a monument. Yet he will naturally occupy some spot more than any other; and it is important that this stand-point should be where as much of the school as possible shall be directly before his eyes. A school in full view will need less governing, than if one half or one fourth of it were commonly behind his back. To be seen by the teacher greatly assists the scholar in self-government.

Another important aid in securing good order and docility in a school is, the influence of daily prayer. Let a teacher in a devotional exercise remind himself and his pupils of the all-seeing Eye—let him thus be seen to fear God—to be thankful for his mercies, and to depend on him for every blessing desired, and all the benefits of good order and good feeling will be greatly promoted. Prayer, appropriate and devout, though limited to three or four minutes—and in school it should not much exceed such limits—would cultivate every good quality of teacher and learners. And now in the middle of the nineteenth century, and here in a Christian land, it is believed that but few districts would grudge the time for such an exercise.

In conclusion then let me recapitulate: To govern well any school the teacher must govern himself—must govern not for the sake of governing, but as a means to an end—must not govern too much, but as far as possible lead the pupils to govern themselves—must have a room convenient and comfortable and supplied with some suitable apparatus—must not delight in severity of punishments or in degrading the wayward, and must by no means degrade himself by vulgar scolding. And further, a decided religious influence is important in its bearing on the *government* of the school, besides all its other bearings.

Town Superintendents.

In the Report from Lamoille County it is stated that one of the town Superintendents went into every school district last winter, and delivered lectures; which tended very much to increase the interest on the subject of schools.

The Superintendent in Windsor sent a printed letter to the parents, teachers, and scholars in each district, at the opening of the winter schools.

The Superintendent in Barton got up an annual celebration on the 22nd of January which was attended by the County Superintendent, who delivered an Address, as did also Rev. L. H. Stone. Rev. D. Dexter and Dr. Damon also made remarks. The weather was unpropitious; but nearly the whole area of the new meeting house was filled with school chil-

dren, who flocked in, with smiles and banners, from all parts of the town. All were so well pleased, that it is intended to have such a celebration annually. The following resolutions were adopted:—

Resolved, That this convention, connected as it is with the annual celebration of the common schools of Barton, is an occasion highly interesting and cheering to every friend of education.

Resolved, That more cheering still shall it be, if the teachers present return to their respective fields of labor, again to engage in their arduous duties with an *enlivened zeal and clear understanding of their work*, and a *deeper consciousness of its vast responsibilities*.

Resolved, That we consider it to be the duty of teachers deeply to interest themselves in the moral training of their pupils, and that so long as this shall be neglected, their *first and most important work* will remain *unaccomplished* and their pupils *uneducated*.

Resolved, That highly as we prize literary and scientific knowledge, yet we are fully persuaded it should ever be the servant of religion and not her master."

One Superintendent in Bennington county made a written Report at the Town Meeting in March, last year. We shall hope to find that it is done extensively the present year, and shall be glad to receive such reports, or extracts from them, for use in the Journal.

For the School Journal.

Moral Education.

NO. 11.

Here our question once more recurs. If our present course is wrong, what is the duty of the teacher in this respect? From what has been said, it is obvious, that the true course is simply to avoid *corrupting* the child by instilling or fostering *false motives of action*, which we are all, both as teachers and parents, but too apt to do, and to give his conscience strength and activity, by constant regular exercise, before it has been perverted by the evil tendencies which every where surround him. It is to form a *habit* of consulting conscience on all occasions; a habit of determining with ease and rapidity between truth and falsehood, right and wrong; or, in other words, it is to enlist the force of habit in *favor* of the right and the true, and *against* the wrong and the false. For, though the germs of virtue exist in the human soul, they may lie dormant through life. Pains, therefore, should be taken to rouse and develop them. Like all other faculties, the conscience is strengthened and cherished by exercise, more especially by regular exercise, while it is equally sure to be enfeebled and deadened by inaction. What once was effected with difficulty, by frequent practice comes to be done with the greatest facility. Habit makes the hardest thing easy.—We see what power of muscle the arm of the blacksmith acquires by the *habitual* use of the ponderous sledge; we learn what wonderful strength the memory attains by those who constantly exercise that faculty. In like manner are our *moral* faculties invigorated by use, weakened by disuse. "The more frequently we use our conscience," says President Wayland, "in judging between actions as right and wrong,

the more *easily* shall we learn to judge *correctly*. He who, before every action will deliberately ask himself 'Is this right or wrong,' will *seldom* mistake what is his duty. And children," continues the President, "may do this as well as grown persons."

It has been well observed, that if you obliterate the conscience from man's constitution, you at once strike from his mind half his motives to action; for the question "Is it *right* to be done," always recurs, as well as "Is it *desirable*." The brute knows what is good in the light of the natural appetites and passions as well, nay, better than man; but man enjoys the infinitely higher prerogative of knowing what is *worthy* of pursuit, considered in the light of moral and conscientious perceptions. Without the conscience, man would perpetually move within the limits of a circle, the centre of which was himself. But *this* places him beyond such limits, and enables him, on suitable occasions, to act with exclusive reference to God, to his fellow-man, to the universe.

Here, then, lies the whole matter within the compass of a nutshell. The teacher must keep the *conscience* of his pupils in continual exercise. He must daily, hourly, present moral actions before them, and call for their decision whether they are right or wrong. The little fellows must form a *habit* of looking at every thing in a moral point of view, of reading a moral lesson in each event of life. The teacher must repeat the question "Is this right or wrong?" over and over, and over again, until the consciences of his pupils acquire a *habit* of *suggesting* it of their own accord; till listening to the right, and rejecting the wrong, becomes a settled principle of their lives; till Virtue comes to be regarded as the supreme good, wrongdoing to be viewed with habitual loathing and disgust.

We must be careful, however, not to remain satisfied with merely scanning, reasoning, and judging of the character and actions of others. These, indeed, are valuable; but chiefly as *aids* in enabling us the more effectually and distinctly to appreciate and direct our own. It is on these latter that we should bestow our most earnest, close-searching attention. Every action, whether performed in the school or in the play-ground, that admits of being viewed in a moral point of view; every passion or inward movement brought to the light of day by the countenance, should undergo a most earnest and close-searching analysis. But this should be performed by the little actor himself. All that is supplied by the teacher should be merely suggestions in the form of questions. The nature of the act should be determined by the actor himself. Nor will the danger of a bias or false judgment be so great as might be supposed. In a school where the consciences of all the pupils are bright and active from continual exercise, where the same or a similar action has been the object of frequent scrutiny, has often passed through the childish ordeal, he will find it next to impossible to hide the true nature of his deeds or thoughts either from himself or from others.

But are our teachers *capable* of conducting an exercise of this nature without assistance? Can they supply, extempore, a series of moral pictures perfectly intelligible to the infant mind, and furnish suitable

questions for the exercise of the conscience upon them? To look for this, for the present at least, is to expect too much. The teachers are evidently unprepared for any such duty. It becomes necessary, then, if we are really in earnest in introducing moral education into the schools, that they be supplied with proper facilities for this most important task, and I now proceed to show how this may be done.

A few years ago, a society was incorporated in New-England, with the express view, among others, of introducing moral culture into the schools, and more particularly into the primary school. For the society were well aware, that to neglect the education of *early youth*, or to furnish childhood with *false motives* of action, with the idea of rectifying the latter, or supplying the former, at a later period of life, was a course which all experience had shown to be ruinous. They confine their views, therefore, at present, to two great objects. The first is, the establishment of a Normal School upon an extensive and liberal plan. As the society believe that a *wrong commencement* of education is the great stumbling-block in the way of reform, this Normal School is intended exclusively for females, and moral education is to be one of the main objects of attention.

The next great object of the Society was to procure proper facilities to enable the teacher to carry their views into effect. The first difficulty that suggested itself was the *want of time* in the schools. It was soon perceived that moral teaching *must* be incorporated with some other study, and that a universal one, or the ready excuse, "I have no time," would be continually thrown in the way by the teachers. Under those circumstances, no medium seemed so proper, none presented such ample opportunities as *reading lessons*, for the inculcation of moral truth. A committee was accordingly charged with the examination of the reading books now in use, more especially those for the younger classes, and to make arrangements for connecting those that might be adopted with a series of moral questions suitable for the full development of the youthful conscience. The impracticability of this scheme, however, was soon discovered. Moral lessons were found to be very sparsely scattered through all the books for early youth, and the few attempts at moral reasoning were so distorted by the vicious course already alluded to, of presenting *wrong motives* of action to childhood, as to render them, in the opinion of the committee, *worse* than useless. A single example will make this sufficiently obvious. Hundreds of others might be offered. In one of the best books which came under review, there is a story of a wicked boy, named Jack, who tries to persuade Harry, his companion, to break into an orchard. Harry refuses, and leaves him; and on his return finds the wall has fallen on wicked Jack, and broken his leg. The owner of the orchard, who had heard all that had passed between the boys, rewards Harry with a basket of apples for his honesty. He shows the fruit to his mother, and assures her that he is now convinced that children are *always happiest when they do right*. Now this story and its morals, like most of those we meet with in school books, would answer an excellent purpose, if outward success were always accorded in

this life to good actions, and failure and punishment to evil deeds. But this is by no means the case. The very same day; yes, the very same hour, Harry or the reader *might* meet with a good child in real life overtaken by misfortunes, a wicked one triumphantly successful. What would be thought then? A similar course of reasoning would inevitably lead to the conclusion, that "children are always *happiest when they do wrong*," or his ideas of right and wrong would be so perplexed and confounded, that he would probably raise his hands and exclaim, like many children of larger growth, Oh! what a mysterious Providence! But the fact is, the only mystery lies in our false teaching. The rewards of virtue are sure. But they are of a spiritual, not of a sensual nature. They lie within. God never promised either outward success or immunity from accidents to the good, and we wrong children exceedingly when we teach them so. Misanthropy and scepticism are the genuine fruits of such a doctrine. For it is completely at variance with truth. Success is the result chiefly of foresight, industry, economy, and prudence; valuable qualities truly, but hardly deserving the name of virtue.

No other course, then, was left for the Society, than the preparation of a set of books whose moral doctrines should be founded on entirely different principles. This plan has been carried into effect. A series of books has been written and published, gradually progressive from the first short sentences for infancy, to reading suitable for children of from 12 to 14 years of age. In these, the great aim, the improvement of the heart and affections, has never been lost sight of for a moment. Every lesson elicits some important moral truth, not by dry precepts, or dogmatic assertions, heard but to be forgotten, but drawn out of the child's own mind, by questions arising naturally from the subject; and addressed *directly to his conscience*, thus keeping it in a constant healthy exercise. The morality of these books is placed, not on any sensual motive, but on its real basis, Duty, on the Right, the Just, the True. — "Is this right or wrong?" "Is it just or unjust?" "Is it true or false?" These are the questions the child is continually called on to answer, and that from his own mind, without prompting from the teacher. Each lesson is wound up with a precept from the Bible, bearing on the subject at issue, which those teachers who have used the books say, are never at variance with the answers of the child. How, indeed, should they? Both proceed from the same Great Author. To use the words of the Apostle, These children show the work of the law *written in their hearts*.

A most precious *intellectual* advantage arises from this species of moral training, which was wholly unlooked for. The questions usually appended to books of this nature serve merely as an exercise for the *memory*. They draw from the child nothing but a simple account of what has been read. But this exercise makes the child an *active agent*, not a mere *passive recipient* of instruction. The object is not simply to bring out a recapitulation of what has been read. The gist of the questions is not, "what did this or that person say, or do, or think?" It is "what do you think, what is your opinion of this or that moral

act or intention!" The most important faculties of the mind, *attention, reflection, deliberation, comparison, judgment*, are actively employed in the process as well as the memory.

Now, may not the peculiarity just noticed be considered the great intellectual desideratum, the crying want of our primary schools? We have now, we have *always* had a sufficient development of the *memory*.—But in which of our school-studies has the child been called on to *think for himself*? What intellectual gymnasium has been provided to fit him for a ready and true decision as to his duties as a citizen and as a Christian; to give him habits of self-reliance, and to enable him to detect the fallacies to which he will be exposed! to rescue him from the snares of the demagogue, the infidel, the fanatic? In short, where will he find an exercise that will require him to reflect, to deliberate, to compare, to decide? In the exercises which the Society have thus provided for the schools, these important faculties are kept steadily employed. And that, too, on the most momentous subjects which can occupy the mind of man, viz: the conduct of life, the decision between right and wrong. And what is it but the greater or less development of these very faculties which constitutes the intellectual difference in the human race? which distinguishes the man of genius from the fool? Let them remain but slightly developed, or when developed let them be impaired, and how confused the thoughts, how apt to be lost in obscure reverie! Even the perceptions of the senses are blunted. On the contrary, let these faculties be judiciously unfolded, and fully exercised, and how clear and distinct will be the thoughts, how completely will the child acquire the control of his mind! Can, then, an exercise be prized too highly which cultivates them at so early an age, before dreamy and slovenly habits have been suffered to take root. The knowledge, too, acquired by the exercise of our own mind, is like food eaten with appetite. It digests well.—It benefits the system far beyond what is *crammed into us* by our teachers.

DYMOND.

THE CLOSE OF THE WINTER SCHOOLS is a favorable time for parents and teachers to review their work, with distinct reference to the future. If but one man in each district would do this faithfully, it could hardly fail of resulting in great good. Wherein and how far have the schools failed to accomplish their purpose? What has been lost through irregularity of attendance—by reason of inconvenient or uncomfortable school-houses—in consequence of a false economy in hiring incompetent teachers because they could be had cheap, or neglecting to procure necessary books or suitable apparatus—for want of order and stillness in the schools—because parents failed to interest themselves and manifest a sympathy with the children in their school employments? What has been the *moral* influence in the school? How, in a word, may the experience of this closing season be made profitable in regard to the future?

The conscientious teacher can never leave a school without a serious review of his own course in regard to it. So many young minds and unformed characters have been entrusted to his care; and he has

been placed, by God and man, in circumstances to exert a powerful influence upon them all. What *has* he done? What *might* he have done?

Preparing to Teach.

It is too common an impression that one who has gone through the usual studies of our common schools with success, must of course be qualified to teach. It is an error that employers and the employed ought to get rid of as soon as possible.

The Board of National Popular Education, of which Gov. Slade is Secretary, consider it important that candidates well qualified so far as the usual studies are concerned, should yet meet and attend a course of lectures and exercises as follows.—

Lectures on the best method of Organizing Schools.

On School Government.

On Moral and Religious Instruction in Schools.

On the best methods of teaching Reading, Writing, Spelling, Geography, Grammar, Arithmetic, Drawing, Composition, Vocal Music, &c.

On the influence of the Teacher in the community where she is placed.

To these lectures are to be added :

Lessons on Physiology as connected with the preservation of Health.

Examination of the class upon the lectures.

Discussion of the subjects of the Lectures in the Class, eliciting the results of the experience of each. Visiting Model Schools in the vicinity.

The more intelligent friends of education throughout the country are guided by similar views. Hence the establishment of Normal Schools, devoted exclusively to the education of teachers.

May we not therefore most earnestly recommend to those who expect to teach next summer, to do all they can towards becoming acquainted with the best methods of instruction and government, and especially with the best methods of forming the characters and habits of children by means of schools?

For the School Journal.

"Conscience—

"OH GIVE IT LEAVE TO SPEAK!"

Teachers who have never made the experiment of the cultivation of Conscience in their pupils, little know how much it might aid them in the task of government. Of course its effects will be more readily apparent on some minds than on others, according to the training in their respective homes. But example is much, and the instructions of a valued teacher often have more weight than those of parents, chiefly because they are not so constant. Well qualified teachers ensure a respect from susceptible children, not often manifested in the same degree to others. I am sure it was so in my own case, having never felt greater esteem for any persons, than I did for three excellent and devoted teachers, who have now gone to their eternal rest. The supposed acquirements of the teacher on all subjects invest him, in the eyes of his youthful charge, with a halo of dignity, unknown to other characters.

"And still the wonder grew

That one small head could carry all he knew."

Now if he has the *task* to turn this to account, his influence for the time being is almost unbounded.

The Bible is the only true standard of right and wrong. An appeal to it as such, is never disallowed in a Christian country, although its sentiments sometimes may be perverted. When you can bring Scripture to bear directly on what you approve or disapprove, you have strength on your side, a "knock-down" argument to the conscientious. Many a child who had indulged in deception has quailed, when the passage "All liars shall have their part in the lake that burneth with fire and brimstone," was repeated to him. "The eyes of the Lord are in every place, beholding the evil and the good," has convicted many a one of concealed iniquity.

If youth are taught that in proportion to the acquittal of their own consciences will be their happiness, and are reminded of it from time to time as they do well, or transgress, the effect will be seen in their deportment. "Try to do right, for the sake of doing right," and not because you will be found out and punished if you do not, is worth putting in gold, and placing in every nursery and school-room in our land. Said a young lady to a teacher long after her school days had ceased, "You little thought such a giddy girl as I was, was influenced by that motto in our school-room," naming the above. "It often checked me, or else made me honest in my confessions, when I had done any thing out of the way. It shows the meaning of 'cast thy bread upon the waters,' &c., for it often occurs to me now, and I am sure you need never be discouraged in trying to make one conscientious." And yet this young person was irreligiously educated, and apparently very far from all serious thoughts. "In the morning sow thy seed, and in the evening withhold not thy hand, for thou knowest not which shall prosper, this or that, or whether both shall be alike good." A conscientious account given in by each pupil at the close of the day to the teacher, in regard to the performance of the day's duties, is a very interesting method of regulating a school. But in order to this, there must exist *strong mutual confidence*, between a teacher and pupils.

The perplexities of a large promiscuous school may be diminished if a feeling of *individual responsibility* can be impressed upon the scholars. Teaching school, or going to school, is too often a mere nominal thing. If a teacher procures a situation merely because he wants the pay, and has no conscience about the discharge of his duties, he will ordinarily have a miserable school. If, desiring employment, another enters into teaching with all his heart, what a difference is perceptible! There are no successful schools, without animated, intelligent, conscientious teachers.—Arduous as are the duties of such, they may be conducive of much enjoyment in both pupils and teachers, even in this thankless and fault-finding generation. But to this end, conscience must be sought as an ally in the mind of the pupil, and until it is, the *threefold* aim of education, improvement in mind, in manners, and in heart, will be still unattained.

E. M. W.

ADVANCE IN POPULAR EDUCATION. An infant school, lately founded by the Duke Sforza Cesarini, at Genzano, near Rome, is the first that has ever been established in or near Rome, as the late Pope strictly forbade the formation of infant schools. The reigning Pope, has, however, sanctioned the infant schools founded by the Duke, who has long sought to introduce them on his estates.

⚡ This number of the JOURNAL is filled with original articles; and yet we omit one already in type. Let none be discouraged by occasional delays in the appearance of their articles; but all take care to keep us well supplied.

Mathematical Questions.

1. A person possesses a wagon, with a mechanical contrivance by which the difference of the number of revolutions of the wheels on a journey may be determined. It is known that each of the fore-wheels is 54, and that each of the hind-wheels is 7½ feet in circumference. Now when, in a journey, the fore-wheel had made 2000 revolutions more than the hind-wheel, how great was the distance traveled? P.

2. A person purchases a certain commodity for \$4500, which he is to pay for at the expiration of a year. He agrees with the seller to give him \$1500 cash, and the remaining \$3000 at four equal periods, \$750 each time. What period must be fixed upon, so that neither party may be a loser? P.

3. A certain sum is to be paid as follows: \$1376 in five months; \$2560 three months later; and the remainder five months after this. If the whole sum be paid at once, it must take place in ten months. What was the sum to be paid? P.

Answer to the 1st Question in No. 10.

By statement, the spring is 32 feet higher than the house; the first branch of the pine tree is level with the spring; and the foot of the pine is 32 feet lower than the house. Then,

$100^2 - 32^2 = 24576$. $\sqrt{24576} = 156.7+$ = the length of a level line from the house to the spring. $156.7+^2 + 165^2 = 51801$. $\sqrt{51801} = 227.5+$ = the distance from the house to a spot on the trunk of the tree 32 feet from the ground. $227.5+^2 + 32^2 = 52825$. $\sqrt{52825} = 229.8+$; which is the distance from the house to the foot of the pine tree. H. H. BARCOK.

Thetford, Feb. 5, 1848.

Neatly done—though rather too much abbreviated.—EWS.

Grammatical Question.

In Bossuet's Funeral Eulogy on Henrietta Maria of France, the following passage occurs:—"He, who reigns in the heavens, and by whom all kingdoms are upheld, to whom alone *belongs* glory, majesty, and independence, is, likewise, the only being," &c. The verb *belongs* is put in the singular, both in the original and in the translation. Is it correct? and, if so, why?

THE AGRICULTURIST.

County Agricultural Societies.

Most of the County Agricultural Societies have lately held their annual meetings, and, in accordance with the law, their proceedings are published in the local papers. This requisition of the law rendered it undesirable to insert in our paper the proceedings at length, and we therefore took no measures to procure them. We now gather from those which have reached us, some matters of general interest, leaving also something for our next number. The proceedings of all the societies have not yet reached us.

Among the most valuable articles before us are Professor Meacham's Address before the Addison County Society; that of Roderick Richardson, Esq. before the Washington County Society; the Report of the Chittenden County Fair, by the Secretary, embracing Mr. May's Address and several good reports; and the Reports of the Windsor County Society.

It may be remarked in general of these publications, that the reports are too meagre to be instructive. In regard to fruit, for instance, in most cases we are only informed that premiums were awarded so and so, for the best six specimens, for the largest, for the greatest variety, &c. In the Chittenden County Report we notice some improvement in this respect—the kinds of fruit which took the premiums being named,—for instance:

“To Joseph Torrey, of Burlington, for the best new variety of fall Apples—the Gravenstein.

To Joseph Torrey, for the best new variety of winter Apples, to wit,—the ‘Jonathau.’

To Chauncey Goodrich, for the best five sorts of winter Apples—the Hubbardston Nonsuch, Baldwin, Danvers Winter Sweet, Roxbury Russett, and Rhode Island Greening.

To C. Goodrich, for five best sorts of fall Apples—the Porter, Gravenstein, Scarlet Nonpareil, Pomme d'Neige or Fameuse, and new Baking Sweet.

To John N. Pomeroy, for the best five varieties of fall Pears—the Bartlett, St. Michael's, Gansell's Bergamot, Seckel, and Van Ness.

To Joseph Torrey, for the best new variety of fall Pear—the Fondante d'Automme.

To John N. Pomeroy, for the two best sorts of winter Pears—St. Germain and Pound Pear.

To Joseph Torrey, for the best new variety of winter Pear—Beurre Diel.

To Chauncey Goodrich, for the best new variety of Plums—the ‘Lombard.’

To Byron Stevens, of Essex, for the best specimen of hardy Grapes—the ‘Lyman.’”

The object should be to state as definitely as possible what the article is, that takes the premium, and whenever practicable, anything peculiar and instructive respecting its origin, culture or production.

Many of the Reports before us were evidently prepared in haste, during the Fairs, and fail to do justice either to the subjects or the authors. And in the written statements of crops, &c. entered for premium,

we notice a similar deficiency in most cases,—the writers not having taken sufficient pains to make their papers complete and instructive.

FIELD CROPS.

We select a list of the more prominent premium Field Crops.

Wheat. Charles Hitchcock, Pittsford, 29 $\frac{3}{4}$ bushels. Henry Jones, Northfield, 31 bushels 3 qts.—Solomon Johnson, Highgate, 35 $\frac{1}{2}$. A. B. Shepherd, Georgia, 30. Allen Smith, Addison, 36, 18 qts.—George Saxton, Shelburne, 36 $\frac{1}{2}$. Levi Comstock, Shelburne, 30.

Indian Corn. Col. Smith, St. George, 209 bushels ears. C. W. Brownell, Williston, 210 $\frac{1}{2}$, ears. Justus Ketchum, Barre, 106. Elisha Hubbard, Berlin, 200, sound ears. S. S. Kelton, Montpelier, 213, ears. Merlin Clark, Castleton, 109 $\frac{3}{8}$. Walter Barton, New-Haven, 120, (average of 3 $\frac{1}{2}$ acres.)—Philo England, Fairfax, 127. Theophilus Barber, Swanton, 114.

Oats. Ora Paul, Pomfret, 51 $\frac{1}{2}$ bushels. H. W. Lester, Rutland, 78 $\frac{1}{2}$. Merlin Clark, Castleton, 75. Samuel S. Kelton, Montpelier, 82 $\frac{1}{2}$. Levi Robinson, Calais, 63. Warner Ford, Essex, 79. R. W. Nash, Sherburne, 70. D. D. Bogue, Enosburgh, 65.

A. H. Davis of Marshfield, raised 310 bushels Potatoes to the acre; D. D. Bogue, Enosburgh, 321; Charles Blinn, Shelburne, $\frac{1}{2}$ acre, 195; B. Newell, Shelburne, $\frac{1}{2}$ acre, 190; S. S. Blinn, Shelburne, $\frac{1}{2}$ acre, 189 $\frac{1}{2}$.

Levi Comstock, Shelburne, 30 bushels beans on one-half acre. T. Conner, Burlington, 332 bushels carrots on one-fourth acre. Reuben Wheeler (Addison Co.), 404 bushels on one-fourth acre.

We gather a few particulars from the specifications.

CORN.

Philo England's crop of corn is the largest included in these reports. He states that the land on which he raised his crop of corn was poor meadow, broken up about the 20th of May, on which was spread 70 loads of rotten manure, and harrowed in lengthwise of the furrows. The seed was soaked over night in copious water, then added one quart of soap to eight quarts of corn, and when planted, as much plaster as would adhere to the corn, the rows about three feet apart and two feet in the rows, with four or five kernels in a hill, applied plaster and ashes the first hoeing and plaster the second. The corn was husked from the hill.

Two other premium crops in Franklin County were cultivated on the same general plan—i. e. green-sward turned over, and then manure harrowed in.

Justus Ketchum, 2d, Barre:—

Mr. Ketchum's land was broke up last spring, yielding previous about one ton of grass to the acre, 22 loads of green manure, applied before plowing, turned in about 7 inches deep. Half a day on the 24th of May spent in harrowing length ways of the furrows, planted on the furrows with common eight-rowed corn—rows 3 $\frac{1}{2}$ to 4 feet distant, hills 2 to 2 $\frac{1}{2}$ feet, from 5 to 8 kernels dropped in a hill, when hoed reduced to 4 or 5 stalks, after being up about 10 days

a mixture of 12 bushels ashes and 150 pounds plaster was applied to the hills, the cultivator was run through twice and it was hoed twice during the season. Cut up and stooked before the frost, crop 106 bushels, expense of cultivation including manure estimated at \$24.63.

Walter Barton's crop of corn was raised on greenward. Land manured 40 or 50 loads to the acre before plowing. Plowed about 6 inches deep; rolled lightly and harrowed. The corn (a mixture of Dutton and common eight-rowed) was planted in the second week in May, 3 feet 9 inches by 2 feet apart; ashed immediately after planting, and plastered soon after the last hoeing. It was suckered and reduced to three stalks in a hill at the time of the second hoeing; and hoed twice. Expense of manuring and getting in crop, \$9.35; harvesting, \$3.34.

John Grovenor's crop of corn was raised on an old field sowed to wheat the previous season. Land plowed in the fall of 1846, and in the spring of 1847 drew on some 40 or 50 loads of stable manure, and plowed beam deep; harrowed and rolled with a heavy roll, then plowed again and left in the furrow. Planted 53d May, in rows 3 feet 4 inches each way. Plowed and hoed three times. Cut 18th September. Corn, Dutton variety. Expense of cultivating and securing, \$16.

WHEAT.

Allen Smith's specification states that his Wheat was raised on land planted to Corn the year previous. Ground plowed in the Fall; in the Spring, 18th May, sowed two bushels Black Sea Wheat on the acre and harrowed it in. Land, black muck, and very mellow and required but little harrowing to cover the seed.—This was the fifth crop on the land, after breaking up, without any manure. Wheat cut with the sickle.

Several of the largest crops were raised on new land in the usual way.

OATS.

Mr. Kelton spread 57 loads of manure on 2 acres of grass land in the spring of 1846, then plowed and planted it with corn—in 1847 plowed and sowed 8 bushels oats on the 8th of May, harrowed and rolled as usual, the soil best alluvial, crop 82½ bushels to the acre.

Mr. Robinson sowed 4 bushels to 200 rods, on which corn and potatoes were raised the previous year. Crop 63 bushels to the acre, weighing 34 pounds to the bushel.

Mr. Boyne's crop of oats (the largest) was raised on new land.

CARROTS.

Reuben Wheeler's specification states that his carrot crop was raised from land in potatoes the year previous. The land a light loam—last year well manured—this year not manured—except ashes and plaster. Plowed, harrowed and laid in ridges two feet apart with a small plow. Sowed on the ridges. The crop being tended at odd times.

ROOT CROPS IN WINCHESTER COUNTY.

We extract part of the Committee's Report, J. L. Lovering, Chairman:—

"It appears from Mr. Cushing's statement that he

has been able, the past season, to raise potatoes at the prime cost of 14 cents and 4 mills per bushel, including every expense—ruta bagas at 6 cents and 2 mills, and sugar beets at 12 cents per bushel. Mr. Bridge raised ruta bagas at a cost of 4 cents and 9 mills. Mr. Bates raised carrots at 4 cents and 2 mills per bushel, exclusive of rent and manure, which, if estimated at Mr. Cushing's price for the same, would bring their cost up to 6½ cents per bushel.

"It appears from an analysis of the different roots, that potatoes contain 76 per cent. of water,—carrots, 88 per cent.—beets, 88 per cent.—and ruta bagas, 91 per cent. And according to the mean of several practical observations by eminent agriculturists in Europe 100 lbs. of potatoes are equal in nutritive value to 138 lbs. of carrots—150 lbs. of ruta bagas or 158 lbs. of beets. From the above premises it would appear that there was no great difference in point of economy between the ruta bagas and carrot crops reported to the Committee. But the greater avidity with which horses eat carrots, and the superior quality of the butter when they are fed to cows, and the less liability to injury from frost are to be taken into consideration. And if any one has any hesitation in deciding between them they need have none in coming to the decision that it is better to have both than neither.

"Mr. Cushing is entitled to credit for his experiments on potatoes with reference to the rot. Although he has not discovered the root of this disease, yet he has discovered the disease of the root to be very much influenced by soil, time of planting and manure. The conclusion from his experiments is that early planting and a light soil are the best preventives, which agree with the observations of at least one of the Committee."

The specification by Nathan Cushing of Woodstock, in regard to Potatoes, Ruta Baga and Sugar Beets is added:—

"The field upon which I raised potatoes contains 77 rods, and lies on the bank of the river. It is rather sandy for meadow land. In 1846, it bore a small crop of grass, not over one ton to the acre, without manure. In the spring of 1847, it was plowed and much sand was left on the surface. Ten common cart-loads of 35 bushels to the load, of green (or strawy) sheep manure were put on, and plowed in, then harrowed, and planted about the 10th of May, with the purple and white potatoes, such as are commonly raised in this vicinity. It was hoed once, and harvested in October, and the yield was 130 bushels. One bushel weighed 66 lbs.

EXPENSE OF CULTIVATION. Hauling 10 loads manure, worth \$1.25, plowing and spreading manure, 3 day man, boy and team and harrowing, \$1.75, ten bushels seed—rather large size, planted whole, at 2s a bushel, \$3.34, one hoeing and cultivating out, 12 days work, \$1.25, 4 days work digging and putting in litter at 5s per day, \$3.34, whole expense of raising, board of men and team included, \$10.93.

130 bushels first rate eating potatoes, worth 2s per bushel, (this fall) by wholesale, is \$43.33. Deduct for labor, &c., raising, \$10.93, leaves \$32.40 for

use of land, and profit of labor. There were a few affected with the rot, say 3 to 5 bushels, when dug, which were not reckoned in the yield. These have proved first rate eating potatoes, and have not rotted any since they were dug and measured. I would here give it as my opinion, that early planted potatoes have, on the whole, rotted less than those planted later; at any rate they have with me. This year I have planted potatoes of several kinds, and at different times, from May 10th, (which was early for last spring) to June 19th on different soils,—some on new land, some with manure, and some without. Those planted on my meadow and sandy soil, have been least affected by rot. Those on new land, planted June 10th, yielded more, but rotted badly.

NUTA BAGAS.

These were raised on 70 rods (see survey) meadow land, green sward, with 8 to 10 loads green manure spread on and turned under about the middle of May, rolled down, then six common ox-cart loads of compost spread on top and thoroughly harrowed twice before sowing, which was done in some of the first days of June. The first sowing did not come up well and they were sown over in the latter part of June, which was some damage to the crop, probably 50 to 75 bushels.

The crop measured 390 bushels,—weight of one bushel 54 pounds. Expense of raising estimated as follows:

Carting and spreading manure, 2,00, plowing and harrowing 2,00, $\frac{1}{4}$ lb. of seed, 17 cts., sowing by drill, 34 cts., hoeing twice, three days each, including board, 6,00, five days pulling and cutting tops; and putting in cellar, 4,17, whole expense of labor and seed, 14,68. 390 bushels worth, to feed out to sheep and cows, at 12 cts. per bushel, is 46,80. Whole expense of raising including labor and board 14,68, which leaves 32,12 profit on labor.

If we call the land \$100 per acre, the interest of which is 6,00, the use of these 70 rods of land would be 2,62, fifteen loads of manure at 50 cts., 6,50, is 9,72, deduct from 32,12 leaves a clear profit of 23,40.

If we calculate the potatoe ground and manure according to the above estimate, we shall find the profits nearly the same this year, being only \$1,00 in favor of the potatoe crop, and that at two shillings per bushel, (the market value) is twice the worth to feed to cattle. I am fully of the opinion that the ruta бага crop is much the safest crop to raise for feeding out to stock of any kind, since the potatoe crop has suffered so much from the rot, rust, &c.

The бага tops were cut close to the solid part, and the roots well shaken, and scraped free from dirt before measuring, so also with the beet crop.

SUGAR BEETS.

Thirty rods of land were planted with sugar beets, and produced 125 bushels, the tops being cut close and dirt well scraped off, weighed 52 lbs. per bushel.—The land was mellow ground, in my garden, and has had a light dressing of manure yearly, probably about 15 loads to the acre.

EXPENSE OF RAISING. Use of land 2,50, four loads manure from hog pen 4,50, plowing and preparing

land 1,00, seed 67, sowing 33, four day's hoeing, 4,00, three day's harvesting 2,50, making 15,00 in all.

125 bushels, at 1s., which is all they can possibly be worth to feed out is \$20,83. Deduct expense of raising, use of land &c., 15,00, leaves clear profit of \$5,83 on the crop, and gives less than half the value for feeding out to stock, than the ruta бага estimate.

The ruta бага does not require so rich land as the sugar beet, and there is less labor in cultivation.—Therefore, from actual experience, I am fully satisfied that for feeding to stock, the бага is the most profitable, especially to feed to sheep and oxen, during spring work. In fact, I know of no crop which will furnish or afford so much keeping, according to the cost, as the ruta бага. I have raised them for ten years past, at an average of 600 bushels at least, to the acre, and should hardly know how to get through the winter and spring without them. When winter sets in, I use them in feeding my cows and sheep. In spring feed them to ewes before and after lambing, to cows, and they are better than potatoes for working oxen, because they are not so relaxing."

If any of our Societies have received a better model of a specification than this last, we have not met with it. We may add that Mr. Lovering's Report indicates a good degree of that science and attention which it is gratifying to meet with in such documents.

EFFECTS OF THE ABSENCE OF SUN AND AIR. Dr.

Moore, the eloquent and amiable author of "The Use of the body in relation to the mind," says—"A tadpole, confined in darkness, would never become a frog, and an infant being deprived of heaven's free light, will only grow into a shapeless idiot, instead of a beauteous and reasonable being. Hence, in the deep, dark gorges and ravines of the Swiss Valais, where the direct sunshine never reaches, the hideous prevalence of idiocy startles the traveler. It is a strange, melancholy idiocy. Many citizens are incapable of any articulate speech; some are deaf, some are blind, some labor under all the privations, and all are misshapen in almost every part of the body. I believe there is, in all places, a marked difference in the healthiness of houses, according to their aspect with regard to the sun, and that those are decidedly the healthiest *cæteris paribus*, in which all the rooms are during some part of the day, fully exposed to direct light. It is a well known fact that epidemics attack inhabitants on the shady side of a street, and totally except those on the other side; and even in endemics, such as argue the morbid influence is often thus partial in its action.

STEAM. The amount of work now done by machinery, moved by steam, in England, has been supposed to be equivalent to that of between three and four millions of men by direct labor.

PROFITS OF ENGLISH FARMING. A European correspondent of the Genesee Farmer states that although the farmers in England have to pay large rents, he thinks their nett profits are greater than those of American farmers, who own the lands they occupy. He thinks the principal reason is, that there is a good home market.

For the Vermont Agriculturist.

Advantages of a Wool Depot.

The advantage of a Wool Depot to the farmer in the sale of his wool has proved all its most sanguine friends anticipated. I will attempt to show that a Wool Depot should be supported, for a few years at least, if we expect to grow the higher grades of wool understandingly.

It is not to be expected that the common farmer should be a good judge of wool. It is seldom that he even looks at the quality of his wool more than twice a year, at shearing and in November. Mr. H. of Charlotte, sent his wool to the Kinderhook Depot in 1846. Upon examination, it was found that the yearling fleeces would not run into so high numbers as those from older sheep. Mr. Blanchard immediately informed Mr. H. of it, requesting the reason of his wool retrograding; but heard nothing until 1847, when Mr. H. called at the Shoreham Depot, and stated that the sire of the yearlings referred to was a buck which he purchased, expecting by this means to improve the quality of his wool.

If a farmer wishes to improve the quality of his wool, let him, when he shears, number his bucks and ewes, weigh each fleece separately, and attach the number of each sheep to its fleece, (I used small bits of pasteboard); also put each ewe's number on her lamb. When his fleeces are stapled and assorted, his numbers will show what is the quality of each fleece; and during the season he can readily see what ewes raise lambs of good size and symmetry.

"No man should buy fine-wooled sheep without consulting the stapler; none but him can determine the precise relative value of clips of wool. A farmer may approximate to it, but cannot arrive at it exactly, nor can it be settled by even the examinations of the microscope. A lot of grade wool, which, if judged of by a specimen selected from the shoulder, would have been pronounced to be of the finest quality, showed, on stapling, conclusively, that the fleece of the full-blood sheep is by far the best."

A SUBSCRIBER.

Shoreham, Feb. 1st, 1848.

For the Vermont Agriculturist.

The Wire-Worm.

It has been remarked that "he is a benefactor of his race who causes two blades of grass to grow where but one grew before." If the remark be as truthful as it is beautiful, why may not he that saves one of those blades from destruction become equally a benefactor!

The wire-worm is a small subject, I am aware, and personally he is a mean, contemptible fellow; but he is nevertheless one of the most despotic and rapacious freebooters known to the farmer. He sets law, both natural and divine, at defiance, and disputes with man the dominion assigned him by his Maker. For what dominion may the farmer be now exercising over his *wormship*? He plants and multiplies himself in the richest soils; he takes the lion's share of the corn, before it is half grown; and his ravages upon all the

other grains and grasses are but little worse. An anomaly to the law of nature, he furnishes nothing for the common sustenance. Other insects, while fattening upon the choice productions of the farmer, bring some mitigation with them in the tempting food they offer to birds and higher animals; while this Ishmaelite sets himself to the destruction of every green thing, while nothing that walks the earth or wings the air but loathes him.

In all soberness we have soils in this vicinity, and I presume it is so elsewhere in the State, which are literally bursting with fatness, yet so infested with this scourge that the farmer's hopes of a harvest are half destroyed when he commits to them his seed of wheat, oats, &c.; while of Indian corn he has not even a shadow to build a hope upon, when, but for this insatiate foe, he might expect fifty, seventy-five, or even a hundred bushels per acre. Ask the owner why he does not cultivate such a piece with corn, and you are answered "It is full of wire-worms." That answer is full and satisfactory. The farmer gets but one crop in a full year. His whole life is made up of a few years at most; and though that life may be happy and independent, it is also a laborious one, and he feels it is too discouraging to bestow that labor where there is no reasonable hope of reward.

In regard to most other obstacles in the way of a harvest, the community are in possession of suggestions and remedies. The weevil, for instance, we avoid by early or late sowing, or destroy them by night fires, &c. But this cormorant regards neither 'times nor seasons' while he eats on from seed-time till harvest. And the farmer seems to have given up the contest in despair, and suffers him to riot unmolested in the best soils, consuming his choicest productions.

Now must this state of the case be perpetual? Is there no remedy? Will not some portion of the science and talent of Vermont lay hold of this subject in right earnest, and discover to us whence their origin—the causes of their alarming increase—their physical character, tenacity of life, &c.; and if possible find out some weak point where we may best attack them with prospect of success? All the suggestions down to this time, as checks even to the wire-worm, have proved like prophecies of rain during a drouth,—simply giving edge to disappointment. The man who shall discover the sure means of securing the farmer against the ravages of this all devouring worm will render the state an untold service, and secure to himself the grateful homage of that class of community for all time.

G. H. R.

Milton, Feb. 5, 1848.

A HARVESTING BARROW. The Democratic Pacific notices a newly patented harvesting machine, invented by Adolphe Nouvière, of Langwy, Moselle, which it says will supersede the use of the sickle on the Continent, and make an immense saving not only of labor but of the grain, much of which is now lost by the weather in the slow mode of harvesting. This machine it calls the Harvesting Barrow (*Brouette moissonneuse*). "A single man," it says, "propels with ease the harvesting barrow on all fields, whatever

or unevenness they may present. The impulsive force which he gives it, passing directly from the wheels to the cutters, causes them to cut the grain stalks and any parasitic plants that may be mixed with them. Its work is wonderfully perfect—the stubble is cut short and at an even height, and what is very important is that it can be repaired by the common wheelwrights and blacksmiths of a village; and beside, the sharpening of the blades can be done by the workman himself as easily as he sharpens his scythe."

CORN CROP. The largest Premium crop of corn that we have noticed this year was 127 bushels, on a single acre. In Windsor County none of those entered for premium went so high as 100 bushels. We learn from Amos B. Pollard of Plymouth that he harvested 750 bushels of ears from a field of 34 acres.—A few years ago, when Mr. P. came into possession of the land (interval,) it would not yield over 25 bushels to the acre. By a good system of manuring and rotation of crops, it had become rich. In the fall of 1846, being in grass, it was plowed deep, and the furrows left standing at a large angle with the surface. In the spring, 20 cords to the acre of coarse manure was spread, and very thoroughly harrowed in; a day to the acre having been spent in harrowing.

Rotation of Crops.

[Continued from page 155.]

II. *The composition of plants* explains the reason why some plants exhaust the soil more than others, and hence may aid us in forming a judicious system of rotation.

We have seen, p. 169, that different plants require different quantities and kinds of alkalies and salts, such as potash, soda, ammonia, magnesia, etc., to complete their growth; and when we examine their ashes, we find that some species require phosphate of magnesia or phosphates, and others potash, and others still, substances rich in nitrogen, such as nitre and ammonia. We have also seen that these substances exist in the soil, in small quantities, and hence are liable to be removed by a continued course of cropping.

1. If we take 100 parts of wheat straw they will yield 15.5 parts of ashes. The same quantity of barley straw will yield 8.54 parts, and 100 parts of oat straw only 4.42 parts. The ashes of all are of the same composition. The principal salts are *phosphates*, especially phosphate of magnesia; hence it is evident "that upon the same field, which will yield only one harvest of wheat, two crops of barley, and three of oats may be raised," and this is due to the different quantity of phosphates which they derive from the soil, and if wheat succeed wheat, these substances will be sooner taken from it.

2. It is evident that if two plants grow beside each other, or in succession on the same soil, they will injure each other if they withdraw the same alkalies from it; hence wild chamomile and Scotch broom impede the growth of corn, because they yield from 7 to 7.43 per cent. of ashes, which contain $\frac{1}{10}$ of carbonate of potash, the very alkali which the corn re-

quires. If these plants succeed each other, the same injury will be done.

3. But on the other hand, if two plants grow beside each other or in succession, which require different quantities of any *alkali* for their development, they will flourish well; hence if a soil contain potash, wheat and tobacco may succeed each other although both are exhausting crops, that is, both require potash; yet they require different quantities of *phosphates*: thus for example, 10,000 parts of the leaves of the tobacco-plant contain 16 parts of phosphate of lime, 8.8 parts silica, and no magnesia; whilst an equal quantity of wheat straw contains 47.3 parts, and the same quantity of the grain of wheat 99.45 parts of phosphates. (*De Saussure*.) Hence the same quantities of phosphates extracted from the soil by the same weights of wheat and tobacco must be as 97.7 to 16, and when the difference is so great as this, the plants may succeed each other.

4. Now if we examine what are called the ameliorating crops, we shall find that they contain a very small quantity of alkalies or of substances containing nitrogen, or of both. Thus the *leguminous* plants contain only traces of salts, p. 266, and hence they do not injure the crops of corn which are sowed with or succeed them. The root crops require still less of these alkalies and salts, and hence their ameliorating effects.

5. If we examine the rotation which is carried on in nature, for example, that pine trees succeed oaks, and oaks pines, and examine their ashes, we shall find the reason of it. "One thousand parts of the dry leaves of the oak yield 55 parts of ashes of which 24 parts consist of alkalies soluble in water," while the same quantity of pine leaves gives only 59 parts of ashes which contain 4.6 parts of soluble salts, (*De Saussure*); and generally those trees whose leaves are renewed annually, require from 6 to 10 times more alkalies than the fir tree or pine.

6. It must be evident, without further examination, that the causes of the failure of crops when cultivated successively on the same field, and the reasons for rotation, are to be found in the kind and quantity of the substances, which each species of plant extracts from the soil. Some agricultural writers have held to the hypothesis, that each species of plant requires different kinds of food, and when it has exhausted its *specific* food from the soil, another species will flourish until its *specific* food is exhausted. We may learn from the above examination what this *specific* food is. It is the *alkali** or salt which the plant requires for its development.

It should be remarked, however, that as one alkali may be substituted for another in some cases, we must seek still further for facts and principles, fully to explain the reasons for the rotation of crops, and their beneficial effect.—*Gray*.

* See Liebig, p. 216.

EXTENT OF CREATION. In a recent lecture in New York, by Dr. Nichol, a celebrated Scotch Astronomer, he stated that light passes through space at the rate of 200,000 miles a second, and that Lord Rosse's fa-

mous telescope, with which he was perfectly well acquainted, has the power of penetrating through space so far, that the most distant star which it can reach is at such a vast distance from us, that its light, moving with this inconceivable rapidity, cannot reach us in less than *sixty thousand years!* Multiply the seconds in 60,000 years by 200,000 miles, and you will learn something of the extent of creation.

ILLUSTRATIONS. We have always intended to use engravings, when we could, to illustrate the best construction of School Houses, descriptions of fruits, agricultural implements, animals, &c. We commence in this number with cuts of two fruits,—the apple quite new, and the plum little if at all known in Vermont. Both are doubtless very superior where they have been cultivated, and deserve a trial with us.

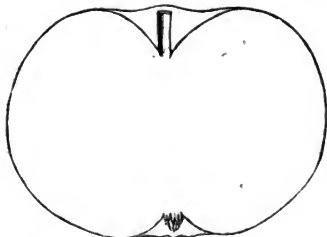


Fig. 1. *Early Joe Apple.*

THE EARLY JOE APPLE. This new apple originated in the orchard of OLIVER CHAPIN, Esq., of Bloomfield, Ontario Co. N. Y., and is now, says the Genesee Farmer, "in the course of being disseminated as fast as scions or trees can be procured." Those who are acquainted with it are unanimous in pronouncing it the finest apple of its season. W. R. Smith of Macedon, says in the Horticulturist: "It may safely be set down as equal to the best of any season." J. J. Thomas, author of the *Fruit Culturist*:—"It is decidedly the most perfect and agreeable table apple we ever had the pleasure of touching." The editor of the Genesee Farmer: "We have never tasted an apple more agreeable to our taste."

The above figure is copied from the Genesee Farmer. Judging by two other figures of the same apple, in the Horticulturist and Cultivator, this must have been drawn from a large specimen, with the stem shortened. We copy Mr. Thomas's description:—

"This apple is only medium in size, and sometimes inclining to small, flat; sometimes slightly approaching flattish-conical, smooth and regular; light yellow on the shaded side, covered with numerous short broken stripes, which pass into a nearly uniform shade of deep red next the sun, and interspersed with conspicuous white specks. Stalk three quarters of an inch long, in a rather shallow and wide cavity, calyx in a small, even basin. Flesh very fine in texture, exceedingly tender, slightly breaking, very juicy, with a mild, sub-acid, rich, and faultless flavor. Ripens during the last half of the 8th month, (Aug). The

growth of the tree is slow, the young shoots dark color, and while it is a profuse bearer, the fruit is always fair."

Scions probably to be had only in Western New-York.

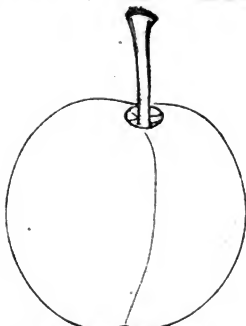


Fig. 2. *Huling's Superb Plum.*

HULING'S SUPERB PLUM. This splendid fruit is comparatively little known, although of the first class in regard to both size and excellence. Mr. Thomas, in the *Fruit Culturist*, says it is often two inches in length and equal in richness to the Green Gage.—Prince calls it "very productive." The tree, on our grounds, appears to be hardy. We copy the description given by Downing in the Horticulturist, Oct. 1846.

"Huling's Superb is one of the most striking and remarkable plums. When fully grown, it is of the largest size, measuring six inches in circumference.—The tree is very distinct and remarkable in its growth—the leaves being very broad and large, and the shoots peculiarly stout and blunt, and with a large shoulder (or swelling) behind each bud. The growth is thrifty, and the young branches downy.

"Fruit very large, roundish oval, with a distinct though shallow suture. Stalk strong and stout, about an inch long, swollen at its junction with the tree; set in a round small cavity. Skin rather dull greenish-yellow, thinly covered with pale bloom. Flesh greenish-yellow not very fine grained, but with a rich, brisk, sprightly flavor, less sweet, but higher flavored than the Washington: it adheres to the stone. It ripens at the middle of August, and is an excellent bearer."

SHIFTING THE BEARING YEAR OF TREES. We see by a late number of Hovey's Magazine of Horticulture, that Mr. Manning, of Salem, has actually tried the experiment with complete success. It is well known the Baldwin only bears every other year. To obviate this, was the object of Mr. M.: and in the spring of 1846, he spent nearly two days in cutting off all the blossoms. It had the desired effect; this year (1847) the tree is completely loaded with fruit. This experiment is valuable, for it shows that in a large orchard, when the trees nearly all fruit the same

year, by change, any number can be made to fruit in the alternate year, simply by the labor of destroying all the blossoms.

Prospects of the Wool Market.

To the following letter from the most extensive, and concededly leading American woolen manufacturer, I would call your particular attention. Several of its declarations, placed in italics, by me, are highly significant.

LOWELL, Mass., Feb. 10, 1847.

HENRY S. RANDALL, Esq., Corland Village, N. Y.

My Dear Sir: Your very kind and interesting favor of the 27th ult. duly came to hand and should, if practicable, have received an earlier reply. The business of wool-growing in this country is destined to be of immense importance, and I am firm in the belief that *within twenty-five years we shall produce a greater quantity than any other nation.*

You ask, "Is the present home demand supplied?" There is not enough annually raised in the country by 10,000,000 lbs. to meet the demand of the manufacturing.

You ask, "What countries can we export wool to, &c.?" This country will not export wool regularly for fifteen years, *for the reason that the consumption will increase as rapidly as the production. I can point out articles made of wool now imported, which will require thirty millions of pounds of that of a medium and fine quality, to supply the consumption.*

The business of manufacturing wool in this country is on a better basis than ever before, inasmuch as the character, skill and capital engaged in it are such that FOREIGN COMPETITION IS DEFIED. A very few years and all articles of wool used here will be of home manufacture.

Now I beg of you to keep the wool-growers steady to the mark. Let them aim to excel in the blood and condition of their flocks, and the day is not far distant when they will be amply remunerated. I shall always have great pleasure in hearing from you, and remain

Yours most truly,

SAM. LAWRENCE.

Mr. Lawrence has certainly got the annual deficit of home wools low enough. Table 10 shows that it was upward of 16,000,000 lbs. during the last fiscal year, 1846.—*Randall's Letters—Jour. of Agriculture.*

Effect of food in the Production of Wool.

The fact has been before alluded to that well fed sheep produce more wool than poorly fed ones. The question now arises—if the effect on the condition (flesh) of the sheep is the same, will one kind of food produce more wool than another? No doctrine is more clearly recognized in Agricultural Chemistry, than that animal tissues derive their chemical components from the same components existing in their food. The analyses of Liebig, Johnston, Scherer, Playfair, Boeckmann, Mulder, &c., show that the chemical composition of wool, hair, hoofs, nails, horns, feathers, lean meat, blood, cellular tissue, nerves, &c. are nearly identical. The organic part of wool, according to Johnston, consists of carbon 50.65, nitro-

gen 17.71, oxygen and sulphur 24.61. The inorganic constituents are small. When burned, it leaves but 2.0 per cent. of ash. The large quantity of nitrogen (17.71) contained in wool, shows that its production is increased by highly azotized food. This is fully verified by the experiments made on Saxon sheep, in Silesia, by Reaumur. A striking correspondence will be found to exist between the amount of wool and the amount of nitrogen in the food.—*Farmer's Library.*

According to Reaumur's experiments, mentioned above, several articles of food compare with each other as follows:—

	Increase of weight in live animal.	Produced wool. lbs. oz.
1000 pounds potatoes,	46½	6 8
sugar beets,	38	5 3
pease,	134	14 11
wheat,	155	13 13
rye,	83	12 10
oats,	146	9 12
buckwheat,	120	10 4
good hay,	58	7 10

Beans contain one-fourth more nitrogen than pease, and according to the above principle ought therefore to be still more valuable in the production of wool.—Indian corn contains not quite half as much nitrogen as pease, and somewhat less than fresh wheat bran.

The Markets.

BRIGHTON MARKET, Thursday, February 17.

At market, 385 Beef Cattle, 25 Stores, 10 pairs Working Oxen, 12 Cows and Calves, 1325 Sheep, and 970 Swine.

All the Stores and 800 Swine were reported last week.

Prices. Beef Cattle—Extra, \$6 50 a 6 75; first quality, \$6 00 a 6 25; second, \$5 50 a 5 75; third, \$4 75 a 5 25.

Working Oxen—Sales at \$75 and 92.

Cows and Calves—Sales at \$24, 28, and 35.

Sheep—Sales at \$3 50, 4 25, 5 00, and 6 50.

Swine—One entire lot 4c., and one #3-8; a lot to peddle,

4½ and 4½c. At retail, from 5 to 6½c.

We noticed a beautiful large Cow from Otsego Co., N. Y. came in at the close of the market, weighing about 2400.—

Advertiser.

NEW YORK CATTLE MARKET, Feb. 21.

At Market, 1100 Beef Cattle, 70 Cows and Calves, and 1300 Sheep and Lambs.

Beef Cattle—The high prices of last week are hardly maintained in the highest average. The sales made were mostly from \$3 to 3 75, at which some 700 head were sold.

Cows and Calves—All sold at from \$20 to 32 50 a \$45.

Sheep and Lambs—Prices range from \$1 75 to \$3 a \$6.

All sold.—*Tribune.*

FANEUIL HALL MARKET—Retail Prices.

Beef, whole animal, or by the	Cheese, new milk,	7 a	10
quarter, lb.	do. four meal,	4 a	6
51 a 7	do. fresh,	a	4
Pork, whole hog,	Halibut, fresh,	a	8
61 a 71	Apples, peek,	37 a	50
do. clear salted,	do. dried,	6 a	8
00 a 20 00	Pears, peek,	— a	50
do. wet clear,	Flour, Gen. com.	6 31 a	6 50
14 00 a —	do. fancy,	7 00 a	7 50
Pigs, roasting,	do. Buckwh't		
1 50 a 2 50	half brl.	4 00 a	4 30
Hams, north'n lb.	Corn, norround,	a	60
81 a 91	do. so. yel. flat,	56 a	58
do. western,	do. so. white flat,	52 a	54
8 a 84	Rye, northern,	a	95
Lard, north. lb.	Oats, do.		50
81 a 91	Beans, bush.,	1 75 a	2 00
do. western,	Onions,		75
8	Potatoes,	1 00 a	1 12
Tripe, lb.			
9 a 10			
Mutton,			
8 a 12			
Lamb,			
8 a 10			
Geese,			
6 a 10			
Turkeys,			
10 a 14			
Chickens,			
10 a 14			
Eggs, doz.			
— a 17			
Butter, lump, lb.			
— a 25			
do. firkin,			
16 a 25			

THE USE OF AGRICULTURAL SOCIETIES. The State appropriates funds to Agricultural Societies and requires the publication of their proceedings, with a view doubtless to some such information as is required by the following paragraphs from the Rules of the Chittenden County Society:—

"Applicants for premiums on field crops will be required to lodge with the Secretary before the Society's Annual Meeting in January, a detailed statement of the soil on which their crops were raised, its condition and culture for three years previous—amount and kinds of manure, plaster, lime, or ashes used—mode of application, time of sowing or planting and quantity of seed—mode of culture—with manner and time of harvesting and amount of crops; furnishing satisfactory proof of the same, and specimen crops to the committee. The premiums will be awarded on the most profitable crops—to ascertain which and the best mode of culture is one of the great objects of the Society."

"It shall be the duty of committees to make report in writing of the premiums awarded by them respectively, detailing as far as practicable, the particular improvement or distinguishing property of the products, animals, or articles on which the premiums are awarded."

It ought certainly to be the aim of all concerned to obtain and publish the information specified in these paragraphs as far as practicable. The reports of all the Societies thus far, though containing some good things, are sadly deficient.

ONION CROP IN DANVERS, MASS. At a late meeting of the Massachusetts Legislative Agricultural Society, J. W. Proctor, Esq. said:—

Carrots were an excellent preparative crop for onions, which was the most important vegetable crop raised in Danvers. More than 100,000 bushels of onions were raised annually in the town of Danvers. Single farmers raised 3000 bushels annually. He thought the culture of this crop was better understood in Danvers than in any other town in the State. The farmers were very particular about the seed they used. They raised their own seed, and took great pains to pick out the best formed onions for this purpose, and had thus succeeded in improving very much the quality of their crops, they being now worth 10 per cent. more than formerly. Great pains was taken in the preparation of the land and the selection of manure for this crop. The muscle bed, mixed with other manure, was considered an excellent dressing for the onion beds. It was not unusual to raise 700 or 800 bushels of onions on an acre of land; and he had known 30 or 40 acres to average 500 bushels to the acre. The clear profit of this crop was \$150 and upwards an acre.

MAMMOTH HOGS. A hog from Kentucky, weighing 846 lbs net, was recently slaughtered in Cincinnati. This was thought to be the largest of the season, until last week, when a farmer from Warren county, Ohio, brought one into Cincinnati that weighed 930 lbs net. It was long bodied, but short legged and small bone; meat very firm.

Domestic Economy.

GRIDDLE CAKES OF UNBOLTED WHEAT. A quart of unbolted wheat, and a tea-spoonful of salt. Wet it up with water, or sweet milk, in which is dissolved a tea-spoonful of saleratus. Add three spoonfuls of molasses. Some raise this with yeast, and leave out the saleratus. Sour milk and saleratus are not as good for unbolted as for fine flour.

These are better and more healthful cakes than buck wheat.—*Exchange paper.*

TO GIVE A FINE COLOR TO MARCANY. Let the tables be washed perfectly clean with vinegar, having first taken out any ink stains there may be with spirit of salt; but it must be used with the greatest care, and only touch the part affected, and be instantly washed off. Use the following liquid: Into a pint of cold drawn linseed oil put four pennyworth of alkanet root and two pennyworth of rose-pink, in an earthen vessel; let it remain all night; then stirring well, rub some of it all over the tables with a linen rag; when it has lain some time, rub it bright with linen cloths.

TO DRIVE RATS AWAY. Mr. Charles Pierce, of Milton, recommends potash for this purpose. The rats troubled him very much, having eaten through the chamber floor; they appeared in great numbers, and were very impudent and troublesome, so that he felt justified in resorting to stratagem and severe treatment for their expulsion from the premises. He pounded up potash and strewn around their holes, threw some under the holes, and rubbed some on the sides of the boards and under part where they came through. The next night he heard a *squeaking* among them, which he supposed was from the caustic nature of the potash that got among their hair, or on their bare feet. They disappeared, and he has not been troubled with them since that time, which was nearly a year ago.—*Boston paper.*

SUBSTITUTE FOR SOAP. Boiled potatoes are said to cleanse the hands as well as common soap; they prevent chaps in the winter season, and keep the skin soft and healthy.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy, - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " " " - -	3 00
16 " " " " " " - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. I.

WINDSOR, VT., APRIL, 1848.

No. 12.

THE SCHOOL JOURNAL.

Importance of the School Journal.

BY THE STATE SUPERINTENDENT.

MESSENGERS. EDITORS:—In a former communication to you I expressed, in general terms, my deep anxiety that the publication of the *School Journal* should be continued, and I also stated that I should have something more to say upon the subject. Circumstances beyond my control have hitherto prevented my expressing my views in the manner I then proposed, and I can now only briefly state some of the reasons why I think the continuance of the Journal a matter of so much importance.

The importance to our state of vigorously sustaining the efforts, which are just beginning to be made, to give to our prevailing education an improved character, and to extend its benefits more generally, so as if possible to embrace all the children of our commonwealth, is a subject too wide and comprehensive for me to think of entering upon its discussion here.—That this supposed importance is a real and a vast one, must mainly be assumed. It may be sufficient, on this point, to state the broad fact, which would be clearly apparent on any liberal and correct view of the subject,—that education does, and must, lie at the very foundation of all our valued interests as a state. It gives form to our legislation and government; it moulds our social and religious institutions; and it determines the direction, character and success of our industry and enterprise. Not only must it constitute the foundation of all valuable institutions in order to secure to them strength and perpetuity, but it is also true that no superstructure can be reared to endure even for an hour, that does not essentially rest upon education as its basis. Whatever value or importance, then, we may attach to those great public interests which we cherish with so much hope and pride, our interest in the maintenance of a sound system of education must be regarded as equally valuable and important.

The highest welfare of the state, then, being the end to which our Educational enterprise really looks, the inquiry may be made—has not the time arrived when a wise and prudent policy would require us to lay the foundations of our prosperity deep and strong, in a better, more thorough and more comprehensive system of education? Should we not now aim to rear a superstructure such as can rise and endure only when thus firmly founded and established?

To express my views more fully and clearly in re-

gard to the importance of this mode of procedure, I may be allowed to resort to a plain and familiar illustration. The time has been, and perhaps within the recollection of most of us, when the prevailing practice, in the erection of dwelling houses, was to prepare frail and unsubstantial foundations—low, open and tottering stone walls, without mortar to bind the materials together. To some extent this was, with the early settlers of our towns, a matter of necessity. They must prepare their dwellings in as speedy, simple and cheap a manner as possible. Even the best buildings, however,—those whose style of construction was not so much governed by necessity, reared upon foundations little more substantial. But the expense of rebuilding fallen walls, of replacing rotten sills, of “banking up” from year to year to exclude the frost; and the losses which the occupant had to sustain in the destruction of his winter stores in spite of all his precautions, were found to be a serious drawback upon his thrift and prosperity, as well as upon his immediate comfort. Sound economy, as well as convenience, demanded a change of the practice. And who does not know that within the last 20 or 30 years, as the means of our citizens have increased so as to allow of it and more correct views of economy have prevailed, a marked and general change has taken place in this particular! The first step in building now is, to lay a firm, well-cemented and permanent foundation.

And it seems sufficiently apparent that a wise economy, correct views in regard to our means, and a just estimate of the importance of the end to be gained, would, in like manner, clearly dictate to us that we ought now to begin to build our higher interests and hopes as a people, upon a broader, better and surer foundation; that we should found them where alone they can securely rest,—upon higher intelligence, more unyielding virtue, and the more universal diffusion of these improved traits of character through the whole mass of our people.

But lest it be imagined by some that this view of the subject ascribes to education an influence upon the prosperity and happiness of a people which it does not really exert, it should be borne in mind that we do not contemplate that narrow process of instruction which aims only at storing the memory with facts, or imparting a sort of mechanical skill, to be exercised only within certain fixed limits; but we are employing the term in its liberal and only legitimate sense, as expressing a process which embraces in its proper scope the purpose of forming character and making men—thinking, acting, upright, useful men. And

the education, too, for which we contend, is one that should, if possible, embrace every member of society,—effecting a state of things in which every individual should substantially contribute to the strength and stability of the state. To use the term then according to its true meaning, it will be seen that all the various institutions of society, whether public or private, are to be regarded as but the ultimate form in which education evolves itself and develops its embodied reality.

Perhaps the remarks on this topic have been extended too far, but it seemed necessary to state, in general terms, what are, essentially, the character and ends of that education which the School Journal is expected to aid in advancing.

Assuming then, as we may safely do under this aspect of the subject, that the advancement of popular education is an important object, worthy to claim our deepest interest and most devoted energies, the question arises,—by what agencies or means are we to secure the attainment of our great purpose? To me it is clear that, whatever other agencies may be necessary, a periodical devoted to the cause of common school education, is indispensable to ensure competent success to the enterprise.

It is needed, in the first place, for the patrons of the school,—the mass of the people. Their interest must be awakened, their prejudices removed, their views enlarged, and themselves be thus prepared for the work which they have to perform. And it is no new opinion, here first promulgated, that the main work is to be done by the people themselves. They have a work to do in whose performance no substitute can be employed,—a work too in which they must be interested, and which they must perform cheerfully, freely, voluntarily. Compulsory measures will not serve. Legislative enactments might impose heavier taxes; but where would be the security that the money thus raised should be usefully expended, that children should avail themselves of the advantages of the school, that they should be furnished with the requisite means of improvement, that the necessary coöperation of parents and teachers should be secured, and the various effort for which law could never adequately provide, be called forth,—unless the mass of our people are led to feel that they are doing a work for themselves—one from which they are to reap substantial benefits? And how is the necessary information to be diffused, and the necessary interest to be awakened, without the aid of a periodical scattered widely through our state? What could a lecture once or twice a year from a County Superintendent, however full and able it might be, do towards accomplishing these great ends? What could it effect, even assuming that all could be induced to come and listen to it? At best it could do no more than to lay out the groundwork, to present an outline of our duties, leaving it to other agencies to supply the details, and show us definitely how those duties are to be discharged. Such means then, unaided; will never answer. We must have a paper, issued at least from month to month—I wish it came twice as often—to visit our firesides, and tell its story there.

Teachers, too, need the Journal. It is true they

cannot depend upon a paper of this kind to furnish them all the special information in regard to teaching which they require. This must be obtained mainly from institutions devoted to the specific purpose of imparting to them the requisite knowledge, and of training them to their work. But whatever their previous advantages may have been, they will find in such a periodical many suggestions calculated to aid them in the right discharge of their duties. The systematic and careful attention which has been paid, within the last ten years, to the subject of common school education, has created a large amount of valuable educational literature. It has developed greatly improved modes of teaching and conducting schools—modes, be it understood, whose usefulness and value do not rest upon uncertain hypothesis, whose correctness is yet to be tested; but upon the ascertained results of thorough, careful and long-trying experiment. And what teacher, fit for his office, would not be glad to gain from the experience of others every possible help in the discharge of duties, at best, so delicate, difficult and responsible? And will not such a paper as the Journal furnish our teachers with much valuable information adapted to this end, to which they would not otherwise be likely to have access?

But again, how can the appointed agents of our School System—our Superintendents—dispense with the Journal? They need it, not only as a medium of communication with those whom they could not well reach without it, but for the purpose of mutually giving and gaining useful hints, to aid each other in the discharge of their duties, and to strengthen each other's hearts as well as hands in their important work. If there is a Superintendent in the state who thinks that his interest in the cause of education is sufficiently ardent, and that he already knows enough about his duties, without the hints and teachings of others,—I cannot speak so softly as to say that I fear he is unfit for his office, but must explicitly avow my wish that he were set aside, and some other one, less knowing and self-confident, appointed in his place.

But, Messrs. Editors, I am rejoiced to learn that the publication of the Journal is to be continued, and as I trust, too, under more favorable circumstances, and with a more extended circulation than that of last year. And why should not its circulation be much more extended, when it is afforded at so low a rate? To every one interested in the welfare of the state, to every man within our borders, it makes a strong appeal for favor.

The question of the continuance of the Journal being settled, an important inquiry still remaining is,—will not those upon whom would more especially devolve the duty of contributing to its pages, endeavor to make it what it ought to be,—what its patrons might have reason to expect it would be? Will not some one who ardently longs to see the people of our state rendered, as a whole, more intelligent, more virtuous and more happy, promptly reply to this inquiry,—“I will do my part,”—and one and another respond to the pledge, until every one of like spirit, from our northern to our southern borders, shall have answered,—“And I will do mine.”

H. EATON.

School Houses.

MESSES EDITORS: Having from its commencement been a careful reader of your invaluable co-worker in the cause of common school education, the *School Journal*, and finding it a convenient medium through which we can interchange our views for the mutual benefit of all,—I would ask for a small space for the purpose of requesting the STAFF, or one of the COUNTY Superintendents to furnish an approved plan for the interior construction of a school-house for the accommodation of fifty or sixty scholars, as we are about to reconstruct our house, and wish to do it in the most approved form. An answer in your next number would very much oblige us, and probably many more, who like ourselves have a miserably constructed and ventilated house.

S. M.

Hartland.

REMARKS.

We very much regret that an answer to the above cannot be furnished by any of the Superintendents in time for this number, and that we have no room for details. We trust that some of the official gentlemen referred to, will see that an answer is ready early for our next number.

If the school house is to be entirely reconstructed, *perhaps* it ought to be removed. It should stand in a dry, retired spot, yet easily accessible, with plenty of room for a play ground; protected from cold winds, and looking out upon as much of pleasant sunshine and pleasant prospect as possible; with shade trees ready grown, if they are to be found in connection with the other requisites.

For the accommodation of 60 scholars, the room (exclusive of entry, &c.) should be 30 feet by 25, at least 10 feet high, and better if 12 or 14. It should front the south. No windows at the ends of the room. The teacher's platform, 7 feet wide, elevated 6 inches, extending across the north end; the wall, quite across the end, occupied as a black-board, and for maps, &c. Floor level; seats for scholars all fronting the teacher's table. The desks, if for two, may be 3½ or 4 feet long; if for one, 2 feet; and 14 inches wide; the front of one desk constituting the back of the seat beyond. The desks varying in height from 24 to 27 inches, and the seats accordingly. Space between the desks (at south end) 8 feet wide, for stove, &c. The windows high in the wall, and made to let down from the top for the purpose of ventilation.

For further ventilation, erect at the end of the room near where the stove pipe leaves it, a wooden box 24 by 6 inches, with an opening near the floor. Inclose the stove pipe from just below the point where it leaves the room to the roof, with a tin tube (say 15½ inches in diameter, the stove pipe being 8 inches) and connect this tin tube with the top of the wooden box, so that a current of air entering at the bottom of the box will pass out through the tube. Such an apparatus will always act when the stove pipe is warm, as it will heat the air in the tin tube and cause it to ascend. There should be care to keep the rain from the stove pipe and the tin tube.

Our limited space forbids further particulars at present.

Examination of Teachers.

The State Superintendent of Common Schools would recommend to both County and Town Superintendents, the following method of examining candidates for teaching, in the belief that it possesses very decided advantages over the mode now ordinarily practised.

Let the Superintendent write out in advance a series of questions in each branch of study in which he is to examine. This he can do at his leisure, and with his text-books at hand to aid him. He can prepare questions more or less complicated and difficult, as he may deem proper; but his leading purpose should be to draw up such as will elicit the most full and satisfactory evidence in regard to the candidate's acquaintance with the branches to which they relate. And meanwhile, he should be careful to have them as brief as may be, yet so expressed as to be clearly intelligible. When a class is to be examined, let each of the candidates be supplied with two or three sheets of paper and a pen or pencil—a pen if practicable—and then let the examiner read the questions which he has prepared, or so many of them as he thinks proper, requesting each candidate to write them down—leaving, of course, sufficient space, between the successive questions, for writing the answers afterwards. When all the questions which he wishes to put in a particular branch have been taken down, the examiner will require the candidates to write the answers—giving them a reasonable time for this purpose, which might be from 15 to 30 minutes, according to the number and difficulty of the questions given. The candidates should understand themselves to be at liberty to take the questions in such order as they please. In the meanwhile the examiner will have nothing to do but to see that there be no communication between the candidates.

When the proper time for answering the series of questions has elapsed, the candidates will be requested to write their names on their respective lists, and hand them to the examiner, who will inspect them at his convenience. And in this way he will go through with the several branches in which he wishes to examine. Probably the questions on one, or at most two branches, would be sufficient to give out at once, as an alternation of the work would tend to relieve its weariness.

It will aid the examiner in ascertaining the results and getting them distinctly before him, to prepare a table in which, under the appropriate heads, he will set down against the name of each candidate the number of correct answers given to each series of questions. In deciding, however, upon the merits of candidates the mere proportion of correct answers probably should not be regarded as the test of a satisfactory examination. Some reference should obviously be had to the character of the questions on which the candidate had failed. To fail of answering one involving some important principle, would certainly be a more serious failure than to have forgotten some isolated fact which the judgment, or a knowledge of general principles, could afford no aid in recalling.—It would clearly be better that a candidate should have

forgotten—or even never have known—what channel lies between the coast of Africa and the island of Madagascar, than be unable to tell the difference between latitude and longitude, or to estimate the length of a degree measured upon a globe or circle of thirty feet circumference. But these considerations will readily suggest themselves to the examiner.

The advantages of this mode of conducting an examination are not merely numerous, but very great. It is, in the first place, a saving of time. Much more can, at least, be done towards effecting a satisfactory examination in a given time, than can by the oral mode—especially if the class to be examined be large. With a large class the examiner may, in an oral examination, go over a wide field, and imagine that his examination has been a thorough one. And perhaps it would have been so had it been confined to a single individual. But he must remember that, numerous as his questions may have been, he has yet received but few answers from any single candidate. Perhaps with a class of only three or four, as many questions could be put to each and answered in a given time by the oral mode, as by that proposed. But assuming that the comparative time required for asking and answering questions by the two modes, be as four to one, it is obvious that if a class of 12 were to be examined, each of the candidates could be asked and answer a series of ten questions, equal to 120 questions and answers, in the same time that would be occupied in asking and answering 40 questions orally; which would be less than four to each candidate.

But a still more decisive advantage of the proposal made is, that it renders the examination more complete and satisfactory. It is, of course, the aim of the examiner to put such questions as will, in their answer, afford the most conclusive and satisfactory evidence of the attainments of the candidate; and it would obviously be a more difficult task, (and far more likely to fail in the attempt to execute it,) to put to each individual, in a class of ten or twenty candidates, ten suitable questions, than to frame, at leisure, a series of ten questions possessing the requisite character. And hence, granting that the examiner could command all the time he might desire, he could still make his examination of a class more complete and conclusive by the written, than by the oral mode. The embarrassment of oral examinations is obviated under this plan, so that candidates can coolly and fairly exhibit their actual knowledge of the subject on which they are examined. And it will readily be perceived, as one benefit, that the process itself of writing the questions and answers will be an excellent practical test of the candidate's knowledge of punctuation, orthography and other branches of Grammar; and, perhaps, almost supersede the necessity of any more formal examination in these branches.

Another advantage of this mode is, that it bears equally upon all, and will enable the examiner to compare the scholarship of the different candidates in a class examined—and also that of different classes—so far, at least, as the same questions are used, or those which might be regarded as of equal difficulty and importance. By this means, too, a statistical

comparison might be instituted between the different Counties of the State. But it would be especially convenient to the examiner to be able definitely to compare the candidates whom he has examined, and to ascertain the advancement from year to year. The time may come when it shall be thought proper to note the grade of scholarship on the license; but this is not advised at present.

The last advantage to be named is, that written examinations will enable the examiner to vindicate himself, in case the justice or correctness of his decisions should afterwards be called in question. The answers, which will remain in his keeping, will show the ground and decide the propriety of his decision in each case. It would, however, be obviously improper that these answers should be shown, unless for the purpose named. But no hint on this point can be needed, as Superintendents will readily perceive that delicacy and kindness should mark all their conduct, whether towards teachers or candidates.

In conducting examinations upon the plan which has been proposed, the Superintendent may need to be upon his guard against giving out too many questions, until some experience shall have satisfied him how much he can do in a given time. Doubtless a few trials will suggest many useful hints which could not well be given here. Superintendents will not, of course, be under the necessity of confining themselves exclusively to the mode here recommended; though it is believed that its advantages are such as will secure its adoption, as the main reliance, in all ordinary cases. And in the meanwhile, it is strongly recommended to County Superintendents to keep a suitable record of the results of their examinations, and also of such other matters as would be useful for future reference.

In regard to the qualifications of candidates—the range of scholarship, and extent of attainments in particular branches, which they ought to exhibit in order to be regarded as competently qualified for teaching—it is, perhaps, unnecessary for me to offer any suggestions at the present time. I would, however, simply remark, that while the necessities of particular cases are to be consulted, it should yet be borne in mind that the movement must be onward, so far and so fast as teachers have the means of higher attainments and better qualification brought within their reach. Nor should it, in the meantime, be forgotten that the process of education, as it ought to be conducted, is not, even so far as its intellectual aspects and purposes are concerned, to be looked upon as a mere transmission of facts and ideas from one memory to another; but a developing of mind—the securing of mental growth, activity and power. Some good degree, therefore, of general mental culture must be regarded as essential to the successful teacher, no less than a mere mechanical knowledge of the branches of study to be taught.

H. EATON, *State Supt.*

Enosburgh, March, 1848.

PARENTAL ADVICE. The following advice was imparted to the late ex-President Adams, by his mother, in 1778, in a letter to him while he was in Europe:

"Great learning and superior abilities, should you ever possess them, will be of little value and of small estimation, unless virtue, honor, integrity, and truth, are cherished by you. Adhere to the rules and principles early instilled in your mind, and remember that you are responsible to your God. Dear as you are to me, I would much rather prefer that you would find a grave in the ocean which you have crossed, than to see you an immoral, graceless child."

For the School Journal.

Moral Education.

NO. III.

Education is evolution, not involution. It is a process for bringing out, not for pouring in. The mind requires discipline and development, and should never, therefore, be converted into a mere magazine of facts. In order to promote the *physical* growth, what is received into the system must be masticated and digested, else it cannot become a part of its substance. It is good for nothing but to be "cast out in the draught." Mere stuffing or cramming is worse than useless. It satisfies not. It nourishes not. It produces no growth. Thinking men are beginning to see that this is equally true as to *intellectual* nurture. The important fact is coming to be generally acknowledged, that a man may be *learned*, in the vulgar sense of the term, yes, that he may be a complete "walking library," and yet little better than a mere dolt as to every thing valuable. Accordingly, many admirable exercises have been adopted for unfolding and expanding the intellect, for nourishing and stimulating the understanding. But, although this reasoning applies with equal force to the cultivation of the moral sense, men seem, as yet, almost utterly blind to the solemn truth. Precept, and precept alone, is resorted to here. The conscience, the grand regulator of life, is suffered to lie dormant. Instead of being roused to activity in early life, its energies strengthened by continual use, it lies benumbed and useless, as if it were a mere supernumerary.

The Bible calls upon us to "Train up a child in the way he should go, and when he is old," it assures us, "he will not depart from it." But can one be said to be "trained up," whose conscience is left wholly undeveloped! To discipline, or train, any part of the mind, is to call that part into regular and repeated action, thus to give it facility and force in the performance of its functions. To discipline the moral sense, the conscience, then, is to give it steady, uniform, regular exercise, so that its perceptions may always be clear and rapid, so that it may always be on the alert, always prepared for duty. And what is its duty! Not to lean upon others; not to wait for their prompting; but to act as a sovereign, to assert its own authority as if it were undisputable. It is to pronounce the moral law to its possessor on every suitable occasion, and that not in weak, trembling accents, but in tones at once clear, loud, and distinct. Surely it is one of the most important parts of education to unfold, strengthen, and purify that especial moral power with which God has invested every child; and without which, in fact, precept must be in

vain. For precept can speak but at intervals. And what is wanted is, a friend, a guard that will accompany us every where, always ready for action. Surely, then, if we neglect this point, we cannot be said to have performed our whole duty towards the rising generation. And if it is to be done at all with effect, it must be done in early youth. Too long have we followed the stupid, inefficient plan of neglecting the first steps; of thinking that any thing would do to begin with. No. We must *begin right*, if we are to go right at all. We must take the mind of the child while it is flexible, ductile, impressible. It will not answer to wait till the faculty we wish to develop has become fixed, hard, rigid from disuse. We must lead it from the beginning into good habits; not wait till bad ones have taken their place, in the vain hope of tearing them out, and substituting better in their room, at a future period. This is too hard a task, a task, indeed, which never can be properly and thoroughly effected.

I conclude this number by two extracts, the first from a report of Horace Mann, Secretary of the Board of Education of Massachusetts, the other from the writings of Dr. Wayland, both of which have a strong bearing on what has been already suggested. In the next number I shall take up the *practical* view of the subject, and endeavor distinctly to show how Moral Education may be conducted in the common school, and especially how the conscience may be developed, strengthened, and endowed with activity and power.

"Teachers," says Mr. Mann, "address themselves to the culture of the intellect mainly. The fact that children have moral natures and social affections, then in the most rapid state of development, is scarcely recognised. One page of the daily manual teaches the power of commas; another, the spelling of words; another, the rules of cadence and emphasis; but the pages are missing* which teach the laws of forbearance under injury, of sympathy with misfortune, of impartiality in our judgments of men, of love and fidelity to truth; of the ever-during relations of men, in the domestic circle, in the organized government, and of stranger to stranger. How can it be expected that such cultivation will scatter seeds, so that, in the language of Scripture, 'instead of the thorn shall come up the fir-tree, and instead of the brier shall come up the myrtle-tree!' If such be the general condition of the schools, is it a matter of surprise that we see lads and young men thickly springing up in the midst of us, who startle at the mispronunciation of a word, as though they were personally injured, but can hear volleys of profanity unremoved; who put on arrogant airs of superior breeding, or sneer with contempt at a case of false spelling or grammar, but can witness spectacles of drunkenness in the streets with entire composure! Such elevation of the subordinate, such casting down of the supreme, in the education of children, is incompatible with all that is worthy to be called the prosperity of their manhood. The moral universe is constructed on principles not admmissive of welfare under such an administration of its laws. In

* It will be shown hereafter that these pages are now in existence, however it might have been when this was written.

such early habits, there is a gravitation and proclivity to ultimate downfall and ruin. If persevered in, the consummation of a people's destiny may still be a question of time, but it ceases to be one of certainty. To avert the catastrophe, we must look to a change in our own measures, not to any repeal or suspension of the ordinances of nature. These, as they were originally framed in wisdom, need no amendment.—Whoever wishes for a change in effects, without a corresponding change in causes, wishes for a violation of Nature's laws. He proposes, as a remedy for the folly of men, an abrogation of the wisdom of Providence."

"Those faculties," says Dr. Wayland, "are the strongest which are used the most. If one man be stronger than another, we shall find that he uses his strength more than the other. He whose occupations require the use of his arms, becomes strong in his arms; while he who walks or runs much, becomes strong in his legs. He who uses his memory habitually remembers easily, that is, acquires a strong memory, while he who rarely tries to recollect what he hears or reads, very soon has a weak memory. And thus men have come to this general conclusion, that all our faculties are strengthened by use, and weakened by disuse. This rule applies to conscience in several particulars:—the more frequently we use our conscience in judging between actions as right or wrong, the more easily shall we learn to judge correctly concerning them. He who, before every action, will deliberately ask himself, 'Is this right or wrong?' will seldom mistake what is his duty. And children may do this, as well as grown persons. . . . Of course, on the contrary, we shall weaken our power of making moral distinctions, if we neglect to inquire into the moral character of our actions. If children or men go on doing right or wrong, just as it happens, without ever inquiring about it, they will at last care but little whether they do the one or the other, and in many cases will hardly be able to distinguish between them. Every one knows that children who are taught by their parents [alas! how rarely, how very rarely is this the case!] to reflect upon their actions, and distinguish between right and wrong, know much better how they ought to act than those whose parents never gave them any instructions on the subject. . . . I have mentioned above, that we could all observe in the feeling of conscience a sort of command, urging us to do what is right. Now this command becomes stronger or weaker just in proportion as we use it."

I trust my readers, if they ever had a doubt on the subject, are by this time fully convinced of the vast importance of a steady and persevering exercise of the conscience in early youth, and consequently well disposed to treat with candor any feasible plan for carrying it into effect. To this, the future numbers of this Essay will be devoted. DYMOND.

Temperance puts wood on the fire, flour in the barrel, meat in the tub, vigor in the body, intelligence in the brain.

Who are the happiest men? They who live to benefit others—who are always ready with a word to en-

courage—a smile to cheer—a look to persuade, and a dollar to assist. They are never fearful lest a good trade or an excellent bargain should fall into the hands of a poor neighbor—but the more rejoice when such a one meets with encouragement.

Hints to Teachers, Superintendents, and Others.

TEACHERS ought to have the few copies of our first volume that remain on hand. To them we will send volume 1, neatly done up in paper covers, and volume 2, in numbers as they are published, both for the price of a single copy, i. e. 50 cents.

COUNTY AND TOWN SUPERINTENDENTS, it is believed, will do much for the cause of education by taking pains to have every teacher they may examine take the Journal.

A gentleman from Connecticut said to us the other day that the circulation of the School Manual (a publication similar to this) was always considered at their School Conventions, Teachers' Institutes, &c., and that every Teacher subscribed of course.

TEACHERS are authorized to act as agents; and by so doing may manifest an interest in the cause of education calculated to secure the confidence of parents and make their schools pleasant. It goes far when people are convinced that the teacher has the cause at heart.

AN EXAMPLE. In one town in Addison County, the people take about one copy to every twelve inhabitants, or nearly half as many copies as there are families. Just reflect for a moment upon the happy influence of 25,000 copies of such a paper, read every month in as many Vermont families!

Our agent in the town referred to, speaking of the prospect for the second volume, says: "I obtained 30 subscribers yesterday."

ANOTHER. A letter from Addison County says:—"An accident recently brought me in contact with two or three numbers of the School Journal and Agriculturist. On reading the name, and the place of publication, I almost involuntarily ejaculated 'Good!' I immediately resolved to circulate it in our own district as much as possible. I borrowed all the numbers which were then published, and whenever I met an individual residing in the district, I asked him to subscribe, and the result is, that of about 20 families 16 have paid me a year's subscription."

ANOTHER. The Journal ordered by vote of the Town. A gentleman in Bennington County, who was Town Superintendent last year, writes: "Finding the work to be worthy of more extended patronage in this town, I resolved to lay the subject before the Town Meeting. I proposed to furnish the present volume to each district (16 in number) at my own expense, if the town would appropriate funds by vote to furnish the next volume; which they accordingly did."

VIEWS OF SUPERINTENDENTS, &c. See the preceding Letter from the State Superintendent. One County Superintendent writes that he shall aim to secure the circulation of 1000 copies in his county.

Another says that while he has anything to do with schools in his region, he shall make special efforts to introduce and extend the circulation of the Journal; and his efforts already prove effectual. These two are west of the mountain. Liberal friends of education in St. Johnsbury order 1000 copies for Caledonia, Orleans, and Essex counties, and assume all the risk and trouble of obtaining subscribers and circulating the papers.

At the late County School Convention at Rutland, the following resolution was adopted:—

“Resolved, That we approve of the plan of the School Journal and Vermont Agriculturist; that we recommend it to the notice of all teachers and parents, and would heartily rejoice to see it in the hands of every family in the County and State.”

That is it,—EVERY FAMILY. Our friend above quoted succeeded with 16 out of 20—leaving four unfortunately destitute.

DISTRICT AGENTS. In many cases it may not be convenient for an individual to canvass a whole town. In such instances, it would be well to enlist the services of some one in each school district—the Teacher, or one of the Committee, or the Clerk. We have received orders like this: “I inclose \$4 in payment for 16 copies of the School Journal for my School District.”

EARLY RISING. There is no time spent so stupidly as that which inconsiderate people pass in a morning, between sleeping and waking. He who is awake, may be at work or at play; he who is asleep is receiving the refreshment necessary to fit him for action; but the hours spent in dozing and slumbering are wasted, without pleasure or profit. The sooner you leave your bed the seldomer you will be confined to it. When old people have been examined in order to ascertain the cause of their longevity, they have uniformly agreed in one thing only, that they “all went to bed, and all rose early.”

Examination of Teachers and Schools.

NO. II.

In the first article under this caption, I stated, that I proposed to give some questions on Bible Geography in this number. As this subject has probably never been introduced in examinations, it may not be out of place to assign a reason for the adoption of such a course.

The State Convention of Superintendents, and some, if not all, of the county conventions, recommend that the Bible should be read at the opening of the school. But this venerable volume can never be clearly understood without a knowledge of its localities. Hence Bible geography forms an essential part in the requirements of a teacher. The same remark will apply to Bible terminology, or a knowledge of the sense of its peculiar terms. And, independently of this consideration, and without even taking into view the immense importance of the volume in its religious aspect, a knowledge of the Bible must ever remain a necessary element in primary education. For biblical knowledge is so inwrought into the very framework

of our community, that a person must always feel and appear to disadvantage, if the allusions to it which are of such perpetual occurrence present no definite idea to his mind.

It is true that knowledge of this kind forms an important item of sabbath-school instruction. But, as this instruction is by no means general, the fact ought not to exclude it from the common school. For the same argument would preclude the reading of the Bible itself. No,—whatever is an *essential* in education should never be trusted exclusively to collateral agencies.

No apology, then, seems necessary for the introduction of Bible history, geography, chronology and terminology in the examination of teachers and schools. **BIBLE GEOGRAPHY, HISTORY AND TERMINOLOGY.**

1. Why is this book called the Bible?
2. Why is the book of Genesis so called?
3. Of what does it treat?
4. Explain why the books of Exodus, Leviticus, Numbers and Deuteronomy are so called?
5. What is the subject of Exodus? of the other three?
6. What is the general name of the first five books? Its derivation?
7. Why is the book of Joshua so called? What is its subject?
8. Why is the book of Judges so called? of what does it treat?
9. What is the subject of Ruth? Why is such prominence given to the story of Boaz and Ruth?
10. Of what do the books of Samuel, Kings and Chronicles treat?
11. What is related in the books of Ezra and Nehemiah?
12. What is the general subject of the Bible from Genesis to Nehemiah, inclusive?
13. Who is considered the great father of the Jews? Of what other nations was he the progenitor?
14. Mention the six principal political revolutions of the Jews, from the period when Joseph was sold as a slave till the close of the Bible history.
15. What is the topic of the book of Esther? Of Job?
16. What is a psalm? By whom was the book of Psalms written?
17. What is the import of the word *Selah*? Should it be read when it occurs in the Bible?
18. What is a proverb? By whom was the book of Proverbs written? How many chapters of it are ascribed to Solomon?
19. What is the meaning of the word *Ecclesiastes*? What is the subject of the book so called? By whom was it written?
20. What is the Song of Solomon considered to relate to?
21. Of what does the remainder of the Old Testament consist? Who are the greater and who the lesser prophets? Why so called?
22. What part of the New Testament may be considered historical? What prophetic? Of what does the remainder consist?
23. Where is Corinth? Galatia? Ephesus? Philippi? Colosse? Thessalonica? Macedonia? Patmos?

24. What is a Gospel? What is the subject of the Gospels? the Acts?
25. On what principles are the Epistles arranged?
26. From which of the sons of Noah did Abraham descend?
27. Where was he born? Where is Chaldaea?
28. Where was Haran situated? Sodom? Gomorrah? Goshen? the land of Edom? of Moab? of the Amorites? of Bashan?
29. Where is the land of the Canaanites? the Hittites? the Hivites? the Perizzites? the Girgashites? the western Amorites? and the Jebusites?
30. Where Philistia? Phenicia? the cities of Tyre and Sidon? of Gath and Ascalon? Babylon? Ninevah?
31. What was the capital of Judah? of the ten tribes of Israel?
32. Of what tribes was the kingdom of Judah formed? What kingdom did the others form? What caused the division?
33. Who were the people called Samaritans in the New Testament?
34. Where was the principal scene of Christ's miracles? Where was he crucified?
35. Where is Antioch? Cyprus? Syracuse? Melita? What is its modern name?
36. Locate the cities in which were the seven churches of Asia.
37. In how many senses is the word *prophet* taken in the Old Testament? What is meant by "sons of the prophets," so frequently mentioned in the books of Kings?—"And fifty men of the sons of the prophets went," &c.
38. In what sense is the word *let* used, in such passages as these: "I purposed to come unto you (but was let hitherto);" "I will work, and who shall let it?"! P.

For the School Journal.

Inconvenient School-Houses.

The New-York State Superintendent of Common Schools has the following apposite remarks on this subject in his last Report:—

"No sound reason or good motive is perceived for exposing school-children to the inclemencies of an old and dilapidated school-house, the pestilential vapors of an ill-ventilated room, or the tortures of an uncomfortable and badly-constructed seat. If parents would avoid all causes of diseases and deformity to which their children are subjected from being compelled to remain for hours each day in such houses, they would at once apply themselves to the work, and have these evils corrected. The Superintendent respectfully submits, that it is equally right and proper to require the inhabitants of a school district to provide a comfortable school-house, as a condition precedent to the annual apportionment of the school-moneys, as it is to require that the schools shall be taught by a qualified teacher."

Nothing, surely, can be more reasonable than the application of such a condition to the apportionment of school-money. The public pay a heavy tax for general education, and they pay it cheerfully. Certainly, then, they have a right to demand that its

avails shall not be heedlessly squandered, spent without either economy or judgment. Let us hope, then, that the hint of the New-York Superintendent will not be lost upon us; but that a voice shall be heard from all parts of the state, calling for such a change in the law, as shall make it obligatory on the proper authority to see, not only that qualified teachers be placed in our schools, but that a building suitable for the purposes of education be provided, before a district shall have a right to any share in the public money. In other words, to see that the public money be not squandered or wasted by the use of improper means. If those who have charge of the matter in each district were made responsible to the other districts on this point, an improvement in school-house architecture would soon be apparent. P.

Troubles are like hornets, the less ado you make about them the better, for your outcry will only bring out the whole swarm upon you.

Is there a word in the English language that contains all the vowels? There is—*unquestionably*.

Mathematical Questions.

1. A father leaves behind him four sons, A, B, C, D, and a fortune of \$2520, to be divided among them as follows: C is to receive \$360, B as much as C and D together, and A twice as much as B less \$1000. How much does A, B, and D, receive?

2. How much silver of 8 parts out of 16 pure, must be melted with $7\frac{1}{2}$ lbs. of 13 parts pure, so that the whole may be brought to 9 parts pure? P.

Solution of the 1st Question in No. 7, p. 104.

If the first son had £100, and $\frac{1}{4}$ of the remainder, and the second £200, and $\frac{1}{4}$ of the remainder, and these portions were equal; then $\frac{1}{4}$ of the first must have been £100 more than $\frac{1}{4}$ of the second remainder, and $\frac{1}{4}$ of the second remainder £100 more than $\frac{1}{4}$ of the third, and so on to the end. The last son must have taken his whole portion, without any share in a remainder. Then $\frac{1}{4}$ of the remainder which his predecessor had, must have been £100—and the whole remainder therefore £800; leaving £700 for the last one, and the same for the others of course.

Ans. Whole estate £4900.

No. of sons 7.

Each one's portion £700.

W. G.

Solution of the 1st Mathematical Question in No. 11.

By the statement, the larger wheel is $7\frac{1}{2}$ feet in circumference, and the smaller one $5\frac{1}{2}$ feet. $7\frac{1}{2} \div 5\frac{1}{2} = 1\frac{1}{5}$ the number of times the smaller wheel revolves while the larger one is making one revolution; hence it gains $\frac{1}{5}$ of a revolution while the larger one is making one. Then as $\frac{1}{5} : 1 :: 2000$ to the number of revolutions of the larger wheel = 5600; and $5600 \div 2000 = 2.8$ revolutions of smaller wheel.

$7600 \times 5\frac{1}{2} = 39900$ feet. Ans.

Proof. $5600 \times 7\frac{1}{2} = 7600 \times 5\frac{1}{2}$.

S. KEITA.

THE AGRICULTURIST.

Culture of Indian Corn.

One farmer harvests thirty bushels of corn to the acre and another one hundred and twenty,—both from the same kind of soil. Indeed the same field is made to pass from one of these points of productiveness to the other in a very short time. See statement of Mr. Pollard's corn crop in our last. And the difference in profit is greater than the difference in bushels.—How is this difference accounted for?

In the early period of its growth all the roots of corn are near the surface; and till the stalk has attained its full size there is evidence that it depends very much on the surface soil. When vigorous, roots frequently shoot out above the surface of the ground, stimulated by nutritive exhalations.

There is a great difference in the filling out of the ears upon stalks of equally vigorous growth; a fact which proves the necessity of having regard to the wants of the latter no less than the former part of the season, in preparing food for the crop. By this time the roots penetrate deeper and extend further. And yet a rich surface continues to be important.—Grant Thorburn astonished his neighbors with his Tree Corn, especially in the filling out of the ears, by spreading rich manure between the rows when the ears had begun to form.

Again, while the corn crop rejoices in a warm sun and needs room for the free admission of heat and fresh air, strict attention must be paid to the point of duty occupying the whole ground. If we suppose each stalk to produce one large and full ear, the crop will be of course in exact proportion to the number of stalks on the acre.

If we examine the statements of successful cultivators it will be found that their practice has uniformly met all these conditions of a good crop.

Earl Stimpson of Galway, N. Y., used to raise one hundred bushels of corn to the acre as a regular crop, on sandy pine plain. His corn (we believe—for we quote from memory) was preceded by clover.—Guided by the nature of his soil, he plowed shallow, turning the soil handsomely over, and thus laying up his clover at the right depth to be reached and used by the corn while the ears were forming and ripening.—Then for the growth of the stalk (and also to act with the clover) he put on a heavy dressing of manure, and harrowed thoroughly. The surface thus became finely pulverized and richly charged with fertilizing matter. The soil being naturally warm and the surface made rich, the growth of the corn was rapid and vigorous. Meanwhile much of the fertilizing matter which had been thrown on the surface and harrowed in, had gradually sunk, by a leaching process, and become mixed with the decaying vegetable matter turned under by the plow.*

Mr. Pollard's soil was a deep rich loam. He broke up the sward in autumn, plowing deep and leaving

* We are aware that some suppose that all fertilizers tend to the surface; but see Professor Norton's Letter in our 10th number, p. 155.

the furrows nearly on edge. Had he turned his furrow over flat, his corn would not have been able to feed upon the turf so well. In the spring, a good coat of manure was put on, and thoroughly mixed with the surface soil by repeated harrowings. Here the wants of the crop through its different stages were equally provided for, but by a method adapted to a different soil.

Our readers will have noticed that most of the Vermont premium crops mentioned in our last (pp. 168-9) were raised on the same general plan,—greensward turned over in the spring by the plow, and manure harrowed in. When the manure was turned in by the plow, it was necessary to provide for the crop in its earlier stages by applications of manure to the hill. And the most successful instance of this kind, was that in which the furrow was the shallowest, and the manure applied to the hill twice.

Mr. Frederick Holbrook of Brattleboro' states that his average crop on 8 to 12 acres annually has not fallen so low as 60 bushels for ten years, while in more favorable seasons it will come up to 80 or 90 bushels. He turns over his sward in the fall, plowing with great care and precision, 6 to 9 inches deep according to the soil; spreads a heavy dressing of compost manure in the spring, and harrows immediately and thoroughly, so as to pulverize the soil above the sod. The plow follows, guaged so as to cover the manure three or four inches deep. He then furrows the land, and covers the corn three inches deep. The corn is thus made to throw out its first roots in the stratum which contains most of the manure.

All cultivators of large crops agree in regard to the thorough pulverization of the soil, by means of the harrow, assisted by the roller when necessary.

The planting should be done when the soil is warm, that the crop may start quickly and vigorously. For the same reason, among others, steeps have been used. Mr. Holbrook, after trial, discards them. Mr. Eng-land, who raised the largest premium crop reported in Vermont in 1837, soaked his seed over night in copperas water; then added one quart of soap to eight quarts of corn, and, when planted, as much plaster as would adhere to the corn. Mr. Loring Wetmore, an experienced farmer in Pennsylvania, puts two pounds of copperas in enough warm soft water to cover one bushel and three pecks of seed, and lets it soak 18 hours. Soap and plaster are then added as above.—Having planted his crop with seed thus prepared, with the exception of four rows, a remarkable, difference was evident through the whole season; the rows from unprepared seed were a week later in ripening than the body of the field, and yielded less by a full third. A farmer in Ohio says he can well afford to pay for the paper which told him of this process, since by adopting it he had increased his crop of corn by at least 150 bushels last season.

We close this article with two extracts. The first is Mr. Holbrook's manner of planting:—

EXTRACT.

"The land is furrowed out as nearly north and south as the shape and surface of the field will admit, and also east and west, the rows being 3½ feet apart

each way. I prefer this distance to planting nearer. In my earlier farming operations, I used to plant corn considerably nearer both ways, of course growing a greater number of stalks and ears to the acre. In a favorable season, as to moisture, probably a few more bushels may be obtained by closer planting; but in offset, the labor is also considerably increased.—There are more hills to plant and hoe, and the ears being usually much smaller, the labor of husking a given number of bushels is greater, and no man can husk small ears and "nubbins" as fast as large ones. Besides, I find by actual experiment, that a closely planted field will not stand a drouth nearly as long as a field planted wider apart. Every stalk requires its due proportion of moisture from the earth in order to carry the ear of corn to full perfection, and of course the greater the number of stalks to the acre, the greater the draft upon the soil for moisture. In planting on a scale of 8 to 12 acres, therefore, I go for more space between the hills, notwithstanding there has been much said in favor of *shading the ground* by close planting, to prevent the effects of drouth. It is of considerable importance to have straight rows both ways, the use of the horse and cultivator being much more effective in this case than crooked rows; besides, no farmer having a spark of honest pride, wishes to gaze all summer at so unsightly an object as crooked corn rows, or expose the same to the gaze of others.

In planting the corn, which is a nice operation, care is used to scatter it well in the hill, putting in 6 to 8 kernels. I always direct the planters to occupy 8 to 12 inches square with each hill. This may appear a small matter to some, but it is a fact that corn planted thus will ear heavier, and there will be more stalks bearing two good ears, than if the common practice of tumbling the corn into the hill at hap-hazard is pursued. Indeed one could better afford to pay a man two dollars a day to plant corn in the way I have recommended, than the common price, planted in the common way. The corn is covered at least 3 inches deep in sandy and gravelly soils, for two reasons. In this section of country we frequently have late spring frosts which nip the corn after it is up, and if covered but slightly the vitality of the tender plant is often destroyed by freezing down to the roots, whereas if covered 3 inches deep, no permanent injury is done. Again, we sometimes have dry weather about planting time, and if the earth dries down to the corn after it has sprouted, it may not come up at all; if it does it will be a long time about it, and at the end of three weeks will not be nearly as vigorous as that planted deeper."

Our second extract relates to the same point, and is from a paper by the late Judge Buel, published in the proceedings of the New York State Agricultural Society:—

"The following table exhibits the difference in product of various methods of planting, and serves also to explain the manner in which large crops of this grain have been obtained. I have assumed in the estimate, that each stock produces one ear of corn, and

that the ears average one gill of shelled grain. This is estimating the product low; for while I am penning this (October) I find that my largest ears give two gills, and 100 fair ears half a bushel of shelled corn. The calculation is also predicated upon the supposition, that there is no deficiency in the number of stocks, a contingency pretty sure on my method of planting.

	Hills.	bush.	qts.
1. An acre in hills, 4 feet apart each way, will produce	2,722	42	16
2. The same, 3 by 3 feet,	4,840	75	20
3. The same, 3 by 2½ feet,	5,908	93	28
4. The same in drills, at 3 feet, plants 6 stalks, inch apart, in the drills,	29,040	113	14
5. The same in do. 2 rows in a drill, 6 in. apart, and the plants 9 inches, and 3 feet 9 in. from centre of drills, thus,	30,970	120	31
6. The same in do. 3 rows in a drill, as above, 3 ft. from centre of drills,	43,560	170	5

The fifth mode I have tried. The ground was highly manured, the crop twice cleaned, and the entire acre gathered and weighed accurately, the same day. The product in ears was 193 baskets, each 84 lbs. nett, and 65 lbs. over. The last basket was shelled and measured, which showed a product on the acre of 118 bushels 10 quarts. I gathered at the rate of more than 100 bushels the acre, from four rods planted in the third method, last summer; the result ascertained in the most accurate manner. Corn shrinks about 20 per cent after it is cribbed. The sixth mode is the one by which the Messrs. Pratts, of Madison county, obtained the prodigious crop of 170 bushels per acre. These gentlemen, I am told, are of opinion, that the product of an acre may be increased to 200 bushels."

Select Fruits for the North.

The *Horticulturist* for March has a communication from Col. Little of Bangor, with select lists of fruits adapted to the Northern part of New England, obtained from eight experienced cultivators,—all of Maine, except our friend Joseph Pinneo, of Hanover, N. H. Col. Little sent to these gentlemen a circular, asking for lists of three, six, and twelve Apple, Pear, Plum, and Cherry trees, which they would prefer if restricted to those numbers respectively.—We copy Mr. Pinneo's lists of Apples, Pears and Plums at length:—

APPLES.

"Three best—Shropshire, Shaker's Pippin, and Baldwin.

"For the six best—Early Harvest, Williams' Favorite, Porter, Shaker's Pippin, Jewet's Red, and Baldwin.

"For the twelve best—Early Harvest, E. Sweet Bough, Sammer Harvey, Porter, Gravenstein, Jewet's Red, Dexter, Danvers, W. Sweet, R. I. Greening, Baldwin, Real Nonesuch,* and Northern Spy.

* This is the "Canada Red" of western New York.—E. HORTICULTURIST.

"For the extreme north, or unfavorable locations, I would recommend the Red Astrachan, Shropshire, Summer Harvey, Taylor's Spice, Shaker's Pippin, Buel Sweet, Pound Sweet, Sweet Pearmain, Blue Pearmain, Morey's Melos Apple, Latham, Dexter, Punch Bowl, and Latham Pippin, (late keeping.)"

"In selecting the number of varieties, I might add half as many more; between which and those named, there would be but little choice."

"In my selection, I have had reference mainly to their *superior value for extensive cultivation*, when considered in all their habits. 'They are all great bearers.'"

PEARS.

"Three best—Bloodgood, Udal, Doyenne, or Old St. Michael."

"Six best—Bloodgood, Udal's Seedling, Udal, Sweet Bell, St. Michael, and Winter Nelis."

"Twelve best—Bloodgood, Udal's Seedling, Dearborn's Seedling, Sweet Bell, Buffum, St. Michael, Louise Bonne de Jersey, Fulton, Vicar of Winkfield, Prince's St. Germain, and Winter Nelis."

PLUMS.

"Three best—Early Orleans, Prince's Imperial Gage, and Purple Gage."

"Six Best—Early Orleans, Duane's Purple, Blue Dwarf Gage, Green Gage, Lombard, and Black Damson."

"Twelve best—Royal Hative, Duane's Purple, Washington, Smith's Orleans, Blue Dwarf Gage, Imperial Gage, Green Gage, Purple Gage, Columbia, Jefferson, Orange, Lombard, and Black Damson."

We suppose the Shaker's Pippin, Morey's Melon, Latham, and Latham Pippin, among the apples, and among the pears, Udal's seedling, to be natives of this region. The pear which Mr. Pinneo ranks as one of the best three, under the name of Udal, may perhaps be a variety known elsewhere by another name, although Mr. P., in his extensive inquiries, appears not to have met with it. The oldest trees known to Mr. P., we believe, have been in bearing in Hartford in this county for forty years or more, and are understood to have been engrafted on apple stocks. Where the scions came from, no one can tell.

From the lists of the seven cultivators in Maine, we prepare the following, adding to the name of each fruit the number of gentlemen who name it among the best twelve:—

APPLES.

Williams' Favorite,	6	R. I. Greening,	5
Ribston Pippin,	6	Early Harvest,	5
Roxbury Roset.	3	Sops of Wine, (Mr. Pin-	
Early Bough,	6	neo's Shropshire, we	
Porter,	5	suppose)	3
Gravenstein,	6	Danvers Winter Sweet,	4
Baldwin,	4	Fameuse,	4
		Golden Sweet,	4

ANTIPATHIES.

I hate long stories, and short ears of corn,
A costly farm house, and a shabby barn;
More eurs than pigs, no books, but many guns,
Corned toes, tight boots, old debts, and paper duns.
I hate tight lacing, and loose conversation,
Abundant gab, and little information;
The fool who sings in bed, and snores in meeting,
Who laughs while talking, and who talks while eating.

Mr. Ellsworth's Experiments.

I made a visit (says Solon Robinson, in the Am. Agriculturist) to Henry L. Ellsworth, one day last month. He is now a resident of La Fayette, Indiana, where he is farming pretty largely on the West Prairie, about seven miles out, on which he has a thousand acres of Indian corn in one field.

Mr. Ellsworth is as full of enthusiasm as ever, and no less busy than he was in his office at Washington. He is an owner and manager of an amount of land, which he is selling, leasing and improving, and which, together with all the business operations that he is carrying on, keeps his office crowded with the multitude who deal with him. Yet he finds time to be continually trying some experiment, or studying out some improvement for the agricultural community.

I saw six pigs, in as many pens just big enough to hold each occupant without exercise, which he was feeding on corn in the ear, corn ground, but fed raw, and corn meal made into mush—two upon each kind. The pigs were all alike in age, breed, size and weight, when commenced with, and after being fed a certain time with carefully weighed quantities of food, they are re-weighed and weights noted, and then those which had been fed upon one kind, are changed to another, and so on; and when the experiment is completed, he assured me he would publish the table. The experiment thus far is very largely in favor of the mush, bidding fair of produce enough to pay toll and trouble of grinding, as well as for cooking, and leave a profit. The number of pounds of good mush that one hundred pounds of meal, well-worked, will make, is astonishing to any one who has never thought much, if any, short of six hundred pounds. Mr. Ellsworth's kettle holds just fourteen pounds of meal at a charge, and several accurate weighings give over eighty pounds when well cooked, and I saw myself that no more water was used than the meal would absorb. But it must be cooked—not merely scalded. A little salt is added, and occasionally a little sulphur.

Mr. Ellsworth told me that he had proved the mooted point of nutritive food in corn cobs. He says: "Hogs will live and thrive upon well-ground corn cob meal alone!" At first they did not take hold. I then added a small quantity of meal of the grain, principally to make the mass ferment quicker, and then they eat the whole and did well. I had great difficulty in getting the cobs ground. Millers are so well satisfied in their own minds that cobs are good for nothing, that they are not willing to let the experiment be tried whether they are nourishing or not. I am satisfied that twenty-five pounds of corn meal added to one hundred of cob meal, is more valuable for feed for growing stock, than seventy pounds of corn meal alone." Such is the language of Mr. Ellsworth. Experiments of this kind should be further tried. One-fourth of the weight of a bushel of ears of corn Nature never intended should be thrown away, and cobs upon large corn farms in the West are literally thrown away. They are neither used for food, fuel, feed, nor manure; for the latter is considered a nuisance.

The Cut Worm.

A propos to the inquiries of our Milton correspondent, we have, in the Brattleboro' Eagle, a letter from ISAAC S. BEERS of North Salem, N. Y., to F. HOLBROOK, Esq., of Brattleboro'. He mentions a way of getting rid of the cut worm that with him has "always proved infallible." His prescription is this:—

"The cut worm, as you well know, attacks corn just after it makes its appearance above the surface, and on the very day of its coming up is the time to apply the remedy.

Take common Liverpool or Syracuse salt, such as is generally used for hay, (or the finer the better) and common wood ashes, mixed in the following proportions:—one-half bushel of salt to two bushels of ashes. Mix them thoroughly, and put as much on each hill as you can hold between your thumb and fore finger,—taking the pains to put it at the root of each plant. The salt is what keeps off the worms, and the advantage in mixing it with ashes is to increase the bulk so as not to be liable to put on too much, (for that would kill the corn) and the ashes are at the same time a great advantage in most soils, in promoting the growth of corn.

Last year, adds Mr. B., I plowed a four acre field of heavy sward-ground, and as it was being prepared for planting, I discovered innumerable cut worms among the grass roots. I thought at the time it would be a good place to try the virtues of the salt and ashes, and so it proved. I went into the field one morning, and found the corn coming up, but in some hills, a little more forward than the rest, the worms had begun their work. I immediately applied the salt, and from that day *not another spear of corn was cut.*"

Now if that shall enable the reader to protect the next crop of corn that he has exposed to the cut worm, he will think the information worth what it costs him.

MARKING SHEEP. A Member of the Windsor Co. Agricultural Soc. states that the clip of wool sold by the late Dr. Jarvis, of Claremont, one year (known always to be of the first quality and in good condition otherwise,) shrunk $2\frac{1}{2}$ per cent. by clipping off the tar marks; and that the whole loss in consequence of the large amount of tar used, was $3\frac{1}{2}$ per cent. The writer recommends, as a substitute for tar, a paint that can be more easily removed as follows:—

"The materials for marking should be lamp-black and linseed oil. If the latter cannot be procured, hogs' lard will do. Mix a small portion of turpentine with the lamp-black before mixing with the oil. It should stand twenty-four hours before using. Those who will use tar at all events, for marking, should endeavor to make one small mark answer all purposes."

NEST EGGS. The eggs are made of clay, formed to the right shape, in the hands. After being dried they are whitewashed; when they are ready for use. The matter is so simple, that it only requires to be thought of to be available. These eggs answer the purpose perfectly—the hens accepting them as fully as those of their own make.

Rotation of Crops.

[Concluded from page 173.]

III. *The excretions which the roots of plants deposit in the soil* have been regarded by some as the most satisfactory mode of explaining the effect of cultivating the same crop in succession on the same field, and of the benefits of rotation. Liebig considers the view now to be presented, as the only one deserving "to be mentioned as resting on a firm basis." It is the theory of M. De Condolle, "who supposes that the roots of plants imbibe soluble matter of every kind from the soil, and thus necessarily absorb a number of substances which are not adapted to the purposes of nutrition, and must subsequently be expelled by the roots, and returned to the soil as excrements." Now as excrements cannot be assimilated by the plant which ejected them, the more of these matters the soil contains, the more unsterile must it be for plants of the same species. These excrementitious matters may, however, still be capable of assimilation by another kind of plants, which would thus remove them from the soil, and render it again fertile for the first. (Liebig.) In a word, one species of plants excretes by its roots substances, which are poisonous or inutritious to plants of the same family, but which may be assimilated by plants of a different species.

The experiments of *Macaire Princeps* prove that the roots of plants do expel matters which cannot be converted into any of their component parts. Some of these excrements are of a gummy and resinous character, and are regarded as poisonous; others are compounds of carbon and are nutritious. Liebig supposes that these excrements are not, according to De Condolle, derived from the soil, but from the atmosphere; and that it is in this way that a soil receives as much carbon from the plant as it yields to it. It now becomes an interesting inquiry what state this excrementitious matter is in, whether it is already fitted to nourish other species of plants, or must first pass through some chemical change!

It appears that the excrementitious matter of De Condolle is matter derived from the soil, and is not fitted to nourish that species, but may be indispensable to some other plant. It is undigested matter, and resembles the undigested excrements of animals, which, though unfitted to be assimilated by one animal, may prove nutritious to another.

The excrements of *Macaire Princeps* may be derived from the soil, but they are matters formed in the vegetable organs. They are compounds produced in consequence of the transformations of the food and of the new forms which it assumes by entering into the composition of the vegetable organs. They are not, therefore, supposed capable of nourishing other species of vegetables, until a change is wrought upon them. This change is effected by the agency of the atmosphere, water, etc., and they are converted into humus.

These views do not contradict each other: both may be, and doubtless are true; both explain why it is that after wheat, wheat will not flourish so well on the same soil, and why one crop must succeed another to keep up the quantity of produce.

The latter theory, however, explains the fact that the excrements of some plants, affect the same species longer than others; for it is evident that the time required for the decay of the excrements may depend upon their nature, quantity, and the composition and character of the soil. In a calcareous soil it would be rapidly effected, and hence it is found that such soils admit of the same crop after the second year; or its decay may be effected by alkalies, and this is doubtless one of the good effects of adding these substances to the soil. But when the soil is siliceous or argillaceous, the same crop cannot be cultivated with advantage until the fourth or ninth year. Thus for example, "clover will not flourish in some soils oftener than once in six years, on other soils, once in twelve years." (*Liebig*.) The excrements of different plants require different periods to effect their conversion into humus; the excrements of flax, peas and clover, for example, when grown on argillaceous soils, require the longest period to effect this change.

From the views now presented, we may see the reason why the interchange of crops produces effects so highly beneficial. It is because the cultivation of different kinds of plants on the same field, enables each to extract certain components of the soil, which are necessary to it, and to leave behind or restore those which a second or third species may require for its growth, and perfect development. In constructing a system of rotation, therefore, we must have reference to the structure of plants, to the alkalies and salts which each species of plant requires, and to the matters which they excrete from their roots. We will therefore conclude this subject with a series of rules derived both from experience, and from the views now presented.

1. Two exhausting crops should not succeed each other on the same field, because their structure is similar, and they derive similar ingredients from the soil.

2. *Culmiferous, leguminous and root crops* should alternate with each other, because their structure, composition and excretions are most diverse, and the least injurious to each other. If the first crop is a hoed crop, the second should be a grain crop; although two hoed crops such as corn and potatoes, or turnips, are better than two grain crops.

3. A grain crop should succeed a hoed crop, rather than precede it. The reason in this case appears to be, that the manures can be more perfectly worked into the soil by a hoed crop, and the soil is left in a better condition for grain. There are, however, two exceptions to this rule. 1. When clover makes one crop in the rotation, it is found that wheat may succeed it with advantage, because they require different alkalies or salts, and the roots of the clover prepare the soil for wheat better than most other crops; hence it is the practice of the best farmers to cut their clover early, and turn over the sod for winter wheat.— 2. A grain crop, as oats, may be taken as a fallow crop previous to wheat or rye.

The following will be found a good system of rotation. 1. The first year, beans, potatoes or Indian corn with manure. 2. The second year, wheat, rye, barley or oats, without manure. 3. The third year,

roots, such as turnips, carrots or beets, with deep tillage and compost manure. 4. The fourth year, the same as the second year, with clover seed. The land should be smoothed and may remain in clover for a few years, or clover crop may be taken, and a rotation, commencing with wheat and hoed crops, succeed in the same order.

In constructing a rotation system, however, the farmer should consult the demand for the articles which he raises, and the character of his soil, as a different system is required for dry and wet or stiff soils. He may select his crops at pleasure, provided he do not violate the principles already suggested. The old practice of growing the same crop for several years upon the same field, if adhered to, will certainly wear out his lands, and he will experience, what thousands have before him, the sure rewards of his folly, barrenness of his lands, and poverty of purse. It is astonishing that farmers have continued the practice so long. It would seem that their observations of what is constantly going forward in nature would have corrected the evil.

Forests are frequently alternating; hard wood succeeds pine; hemlock, pine and cedar succeed hard wood. Raspberries and strawberries are endowed by nature with roots by which they change their location. Natural meadows change their grasses gradually, and the fact is so general, that it may be regarded as a law of nature; change of plants being one of the means which nature employs to keep up fertility, or to restore her exhausted energies.

A good rotation system forms the basis of good husbandry. Without it, the soil may be kept fertile by the addition of great quantities of manure and rest, but with it, time and manure are economized, the soil rendered more and more fertile, and the products increasingly more valuable.—Gray.

The Apple Culture and Trade.

In conversation with an active and intelligent gentleman from Massachusetts a few weeks since who is engaged in the apple trade, we learned some facts which may not only be interesting, but of practical utility to our readers. The gentleman purchases his apples at Rochester, New York, at one dollar a barrel. They are brought by canal to Albany, and thence by ship to Boston, at the expense of 87½ cts. per barrel for transportation. The favorite apple is the Spitzbergen, which is preferred to all others, both for the productiveness of the tree and the flavor of the fruit. When the apples are brought to Boston, they are taken in the same barrels to a neighboring town, where they are kept in cold cellars, and from thence removed by rail roads to the large towns where they are wanted, and sold at \$3.00 per barrel in the fall and early part of the winter. The gentleman sells five thousand barrels a year. Since Thanksgiving he had sold two hundred barrels in our own town of Concord, from which twice five thousand barrels ought to be sent every year to other markets. The quantity he sells in Manchester and Lowell is very large—sometimes 200 barrels a week. Think of this, farmers of New Hampshire; 5,000 barrels of apples brought ev-

ery year by a single individual, a brother Yankee of no more wit than yourselves, all the long way from Western New York, by canal, ship and railroad, a distance of about 600 miles in the circuitous route pursued, and then sold at your door at a great profit! And yet New Hampshire is the Paradise of the apple tree. With true Yankee good sense the gentleman urges all farmers to set out new trees and trim them up and manure their old ones, as the supply will not equal the demand in the days of those now living. He stated that a farmer in Newbury, Mass., had an old orchard which being neglected and the soil exhausted, yielded about 25 barrels of apples. He dug about the roots of the trees, and manured them, according to the Scripture record; and instead of 25 barrels he now gathers *three hundred* from the same trees, and the fruit greatly improved in size and flavor. Another farmer in the same vicinity raises annually 1200 barrels. And what may be done in New Hampshire, is seen in what the gentleman informed us Mr. Robinson of Chester has already done. He is about 70 years old, and devotes himself in his old age to the pleasant task of taking care of his orchard, a young and thrifty one, from which he gathered the present year *eleven hundred bushels of Baldwins*, which in size, flavor, and preservation, exceeded any our informant had seen. Other farmers in the same town exhibit commendable enterprise in the same direction. The secret of preserving apples through the winter and spring into midsummer is keeping them in *cool cellars*, the temperature of which is regulated and adapted to the wants of the fruit.—*Concord (N. H.) Cong. Jour.*

The Potato Rot.

The London Gardener's Chronicle gives the results of more than sixty different experiments upon the potato, tried in the Garden of the Horticultural Society last year. The object was to test the various preventives of rot that have been recommended. The result was a failure, from the beginning to the end of the long list. Lime, charcoal, salt, sulphur, potash, soot—the planting of seeds instead of tubers—every remedy, in fact, that has been recommended, was tried, and all failed. The conclusion is "that there is no known preventive of the disease; that neither renewal by seed, nor introduction from foreign countries, nor treatment in the earth, afford any guaranty against its attacks; and that its progress cannot, in the present state of our knowledge, be resisted with such success as to justify the recommendation to the public, of any of the remedies hitherto proposed."

We cannot here substantiate by any detail of facts, what we are about to say, but only remark, as the result of our own reading and observation, that *probably* the cultivator will stand the best chance for a sound crop, if

1. He plants *early*. The evidence, we think, is decidedly in favor of planting as early as possible, and also of selecting early kinds. And 2. If he selects for his crop a soil friable rather than tenacious, dry rather than moist; pulverizes it thoroughly, with a thorough admixture of such manures as will tend to keep it open and light; and either earths up the hills

considerably, or plows deep and repeatedly between the rows.

We notice that two of the London Horticultural Society's experiments differed only in the fact that in one case the hills were earthed up repeatedly and in the other not. In the latter case, 50 per cent. of the crop rotted; in the former scarcely any. The difference seems to have been occasioned by keeping the soil very loose and rather dry.

HOW TO WHITEN LINEN. Fruit stains, iron mould and other spots may be removed by applying to the part, previously washed clean, a weak solution of the chloride of lime or of soda, oxalic acid, or salts of lemon, in warm water, and it often may be done by merely using a little lemon juice. The part which contained the stain or spot, should shortly after be thoroughly rinsed in clear warm water (without soap) and immediately dried in the sun.

Linen that has acquired a yellow or dingy color by careless washing, may be restored to its former whiteness by working it well in water to which some strained solution of chloride of lime or of soda is added, observing to well rinse it in clean water, both before and after the immersion in the bleaching liquor. Never attempt to bleach unwashed linen, and avoid using the liquor too strong, for in that case the fabric will be rendered rotten.—*American Agriculturist.*

Prospectus of Volume II.

Each number of this paper contains 16 large octavo pages, with double columns. The first eight pages are devoted to Education, and principally to education by means of Common Schools.

The remaining eight pages are devoted to Agriculture, and Rural and Domestic Economy: embracing all the subjects usually treated of in agricultural papers.

The Second Volume will commence with the May number.

TERMS:

For a single copy,	- - - -	50 cents.
5 copies, sent to one address,	- -	2 00
10 " " " " "	- -	3 00
16 " " " " "	- -	4 00

And any greater number at the rate last named, or 25 cents per copy.

☐ Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers *not* written on their papers) and to be sent only so long as they shall have been paid for.

AGENTS.

☐ Any one who pleases may act as agent for this paper. He has only to collect the money (25 cents each) from his neighbors, make arrangements to distribute the papers, and forward his order with the cash.

Agents are authorized to retain 10 percent. of what they collect.

TRANSPORTATION.

☐ Packages are sent at the expense of the publishers to J. Steen, Brattleboro; Rev. J. D. Wick-

ham, Manchester; J. Barrett & Son, Rutland; W. L. Clarke, Middlebury; S. Huntington, Burlington; and J. W. Hawes, Montpelier; and the same will be done to any other place in the State to which as many as 500 copies may be ordered.

If sent by mail, the postage to each subscriber will be only 12 cents a year.

BISHOP & TRACY.

Windsor, Vt., March, 1848.

THE INDEX at the close of our First Volume will be found very complete. A slight examination of it will show how great a variety of important topics may come under consideration in two hundred such pages as ours, in the course of a year.

SEND YOUR ORDERS EARLY. Our friends will recollect that no paper is to be continued on last year's subscription. Those who want it, must send an order for volume second, with the money.

Orders should be sent as early in the month as possible.

The May number begins the volume, and must be printed before the end of April.

The Markets.

Wool. The Boston Courier reduced its quotations last week. They now stand as follows:—

Prime Saxony Fleeces, wash'd lb.	43	a	47
American full blood	do	38	a 42
do 3-4	do	32	a 35

American 1-2	do	40	a	32
do 1-4 and com.	do	28	a	30
Smyrna, washed,		15	a	20
do unwashed,		8	a	13
Bengal, unwashed,		7	a	9
Buenos Ayers, unpecked,		6	a	14
Extra Northern pulled lamb,		35	a	37 1/2
Super, do do do		31	a	33
No. 1 do do do		28	a	30
2 do do do		20	a	22
3 do do do		14	a	15

The Boston Daily Advertiser continues its quotations without change:—

Saxony fleeces,	47 1/2	a	50
Full blood,	42	a	42 1/2
1/2 blood,	35	a	37 1/2
Common 1-4 blood,	30	a	32
Lambs, Superfine,	33	a	35
do No. 1,	28	a	30
do No. 2,	20	a	23
do No. 3,	9	a	12

FANEUIL HALL MARKET—Retail Prices.

Beef, whole animal, or by the quarter, lb.	5 1/2	a	7
Pork, whole hog,	6 1/2	a	7 1/2
do clear salted,	17 00	a	20 00
do west'n clear,	14 00	a	—
Pigs, roasting,	1 50	a	2 50
Hams, north'n lb.	8 1/2	a	9
do western,	8	a	8 1/2
Lard, north. lb.	8 1/2	a	9
do western,	8	a	8 1/2
Tripe, lb.	9	a	10
Mutton,	8	a	12
Lamb,	8	a	10
Geese,	6	a	10
Turkeys,	11	a	12
Chickens,	10	a	12
Eggs, doz.	—	a	16
Butter, lump, lb.	—	a	25
do. firkin,	18	a	23
Cheese, new milk,	7	a	10
do. four meal,	4	a	6
Cod, fresh,		a	4
Halibut, fresh,		a	8
Apples, peck,	37	a	50
do. dried,	5	a	6
Pears, peck,	—	a	50
Flour, Gen. com.	6 87	a	7 00
do. fancy,	7 50	a	7 62
do. Buckwh't			
half brl.	4 00	a	4 50
Corn, nor. round,		a	70
do. so. yel. flat,		a	63
do. so. white flat,		a	57
Rye, northern,		a	95
Oats, do,		a	48
Beans, bush,	1 50	a	1 75
Onions,		a	75
Potatoes,	1 00	a	1 12

CONTENTS OF VOLUME I.

THE SCHOOL JOURNAL.

A	
Amusing specimens of modern syntax,	7
Arithmetic,	40, 52, 65
Arithmetical,	20
— Questions, 21, 104, 131, 150, 168, 184	
Astronomical pun,	8
A swarm of Bees,	7
B	
Bad papers,	8
Blackboard, the plaster,	100
Boston boys,	72
Buying apples,	7
C	
Careless girl, the,	40
Cheap pleasures,	82
Children, treatment of,	104
Conscience, how to awaken the,	119
— oh give it leave to speak,	167
Courtesy, want of,	88
Cradle, the, and its tenants,	70
D	
Districts and Scholars, number of,	60
— small, and the school law,	26
Doing good to others,	103
E	
Early morning,	72
Education the first element of prosperity,	68
Education in Scotland,	19
Effects of encouragement,	88
Enigma,	8, 24
Examinations of teachers and schools,	118, 183
Examinations of Teachers,	179
F	
Fourth of July,	18
Fresh air,	36

G	
Geography, a hint on the study of,	109
— newspapers in teaching,	104
Genius, schools of,	131
Geometry,	51
Good manners—the difference,	9
Grammar, the study of,	88
Grammatical Question,	108
H	
History, the right use of,	56
How to be a man,	5
I	
Introductory,	1
Irregular attendance, losses from,	152
Is this paper a plan of the publishers?	2
J	
Journal, the need of this,	2
K	
Knowledge, attainment of,	132
L	
Let children sing,	104
M	
Manners, or respect to parents,	129
Mayor of Boston and the President,	71
Meaning of words, importance of a thorough understanding of,	96
Moral and religious culture,	86
— duties and habits, how taught,	84
— Education,	145, 165, 181
N	
Never give a kick for a hit,	40
Noble spirit among the little girls,	21
Normal school and teachers' institute,	47
Notes by the way,	134
Notices for School Conventions,	23, 131
No time to read,	72
O	
Our next volume,	130
P	
Paternal advice,	180

Parents, hints to,	114
— responsibility of,	147
Perseverance, or try again—song,	56
Plane Story,	71
Planets, distance of the,	21
Progress in New-Hampshire,	146
Pronunciation, errors in,	97, 113
R	
Reading,	18
Recitations, best manner of conducting,	116
Recipe for mothers,	152
Recreation,	7
Religious impression, making a,	101
Respect the children,	21
Rhode Island, improvement in,	38
S	
Saving time,	5
Scholars, classification of,	132
School Books,	119, 120
— Children, Letter to,	3
— Convention Londonderry,	82
— " Orange County,	67
— " Addison County,	81
— Common Association, Caledonian County,	129
— Districts, multiplicity of,	38, 50
— Diversions,	8
— Economy,	115
— Edinburgh Sessional,	35, 54
— Government,	37, 117, 163
— Houses,	179
— " inconvenient,	184
— Journal, importance of the,	177
— Moral influence of,	84
— Order and School moral,	69
— Teachers,	2
— The best possible,	118
— The morals of,	114
Schools, Agriculture in,	23

THE
SCHOOL JOURNAL,
AND
VERMONT AGRICULTURIST.

VOLUME SECOND.

WINDSOR:
PUBLISHED BY BISHOP AND TRACY.
1848-9.

PRINTED AT THE CHRONICLE STEAM-PRESS.

N. W. Hartney Secy.
1848

THE SCHOOL JOURNAL, And Vermont Agriculturist.

VOL. II.

WINDSOR, VT., MAY, 1848.

No. 1.

THE SCHOOL JOURNAL.

For the School Journal.

Moral Education.

NO. IV.

Having, in the former numbers, sufficiently shown the importance of moral training, more especially of the full development of the conscience in early youth, it only now remains to point out the *means* by which this training and development may be effected in the common school. These may be arranged under five heads, viz :

1. The Bible.
2. Development of the Conscience.
3. Vocal Music.
4. Taste for Beauty.
5. Miscellaneous.

1. **THE BIBLE.**—I believe all our conventions, state as well as county, have recommended that the Bible should be read in the schools, but nowhere have I met with any directions for using it. In discussing the subject, however, in the state convention, and in that of Rutland County, the opinion seemed to be almost unanimous, that it ought *not* to be used as a *reading-book for learners*. In the latter, it was directed to be *read at the opening of the school*; it is to be presumed as a religious exercise. But even this recommendation, though more precise than that of the state convention, must still be allowed to be too indefinite, since the book may be read so as to produce an injurious, rather than a beneficial effect. There is nothing in the mere sound of the words which will operate as a charm, either to purify the affections, to restrain the desires, or to meliorate the heart. On the contrary, if selections are made at random, the reading may be wholly unintelligible, especially to the children that make up the bulk of our summer schools, and, if so, can have no other effect than to produce a lasting disgust for the book, and to generate and strengthen the pernicious habit of day-dreaming, so injurious in after life, not only in study, but also in our public and private exercises of devotion.

It must, indeed, be confessed, that there is some danger of this, even though the selections be made with sufficient care. In the present undisciplined state of the schools, it is a difficult task to catch the attention of the whole at once, and still more difficult to retain it. In too many instances I fear it will be found that the commencement of this reading exercise is the signal of general inattention, if not of covert

play. But the task must be accomplished, if any good is expected from the reading of the Bible in school; yes, if we would not even do mischief by the practice; and it will not, I think, be found so difficult, if the evil and its remedy be only steadily borne in mind.

The object of reading the Bible I take to be twofold, viz : to give *instruction* to the pupils, and to excite such an *interest in the book* as may induce them to love it, and to read it for themselves. The instruction should be chiefly drawn from the New Testament, as the summary of Christian doctrine, the compendium of pure morality. The second object may be obtained from both, if the teacher keeps in view the capacity of his pupils. To such teachers as lack experience in these matters, the following list of selections from the first book of each of the Testaments, may prove useful. I add a few suggestions as to the manner of using them, premising that my remarks apply chiefly to the summer schools, where the children are small, although precisely the same principles should be applied to the winter schools. I trust that further selections for small children will be made by an abler pen. The following, however, will be found amply sufficient for the coming season :

Selections from Genesis—to be read in the order here given. When several chapters are given in connection, the numbers are always to be understood as *inclusive*. Chap. 1 to 3; 4 (10 v. 10); 6 to 8; 9 (10 v. 17); 11 (10 v. 9); 12 to 18; 19 (10 v. 31); 20 to 24; 25 (v. 1; and 5 to 11. Then say, "And Isaac had two sons; the name of the elder was Esau, and the name of the younger Jacob." Then read from v. 27 to the end); 28 to 29; 31 to 33; 35 (10 v. 15); 37; 39 to 45; 46 (omitting from v. 8 to 27); 47 to the end of the book.

St. Matthew, chap. 2 to the end of the book.

The exercise should be short, very short at first, say from one to three or four verses, gradually extending it as the capacity, memory, and interest of the school shall advance. For the first day or two, a question should be put at the close of each sentence, or even oftener, so that the teacher may be certain that proper attention is given, and that the subject is fully understood. But these questions should by no means be continued. They should be gradually dropped, and that as fast as the improvement of the pupils will allow. The grand object of the teacher, the point that he should keep constantly before his eye, should be, as rapidly as possible to enable every pupil to repeat the substance of a whole chapter distinctly, clearly, and minutely, after hearing it once read, without the intervention of a single question; for these

questions should be considered as mere leading strings for the feeble pupil, which are not meant to be used for life, but only till his limbs acquire sufficient strength to support him. At the commencement of each reading after the first, one of the pupils should be called on to state the substance of one or more of the lessons immediately preceding, in order to preserve the connexion, and improve the memory. The whole school should take their turn in this review, but not in regular order; for all—not merely one or two—should prepare themselves for it.

The following is offered as a specimen of the manner of conducting the exercise. No one but the reader should be provided with a book, for this should be a listening, not a reading exercise, to prepare children for the public religious duties of the Sabbath.

Teacher: John, please to give us the substance of what we last read (or of what we have read for the last—days). Very good. Now all give close attention to the reading. "And the Lord said unto Noah, Come thou, and all thy house, into the ark." Who did God speak to, May? (a child on the other side of the room.) Jane, what is meant by *house*; thou, and all thy house? What is an ark, Robert? Lucy, dear, can you tell me what the ark was made of? Very good. "For thee have I seen righteous in this generation." What is meant by "righteous?" by "this generation?" Who is meant by "thee?" by "I?"

All this may seem tediously minute; but if we look for a moment at the value of the object to be attained, neither the time nor the pains will be grudged. I might here, in place of this imperfect specimen, have recommended one of the numerous series of question books for Sabbath schools; but this would not have answered the present purpose. I want the teacher to rely on his own resources. When questions are put verbatim from a book, the recitation is too apt to dwindle into a mechanical exercise, to the extinction of all life and spirit, both on the part of the teacher and pupil. Besides, as before observed, this kind of close questioning is to be gradually discontinued until entirely dispensed with. To determine how fast this may be done, I would say that when all the questions are answered correctly and without hesitation, the teacher is using *too many*; on the contrary, when there is much hesitation, or when many blunders are committed, he may be sure he is using *too few*.

It is sufficiently evident that in this, as in all the other exercises of the school, very much will depend on the knowledge and tact of the teacher, though the very best informed will be more efficient if aided by suitable books of reference. Of these, now-a-days, there is an abundant supply. But, of all the aids to the study of the Bible, I have seen none that within a small compass contains such a body of valuable information as a work which has lately appeared in Boston, from the pen of the Rev. Dr. Jenks, author of the *Comprehensive Commentary on the Bible*. It is entitled "The Explanatory Bible Atlas and Scripture Gazetteer," and contains every thing that could be wished for, illustrative of the geography, topography, history, &c., of the Bible. Geography and Chronology

are said to be the *two eyes* of history, and history forms a large part of this holy book. Accordingly, without a knowledge of sacred geography and chronology, the facts related in the Scriptures must present but a confused and fleeting mass to the mind of the reader, and many of them must be utterly unintelligible. How important, then, either that our teachers should be well versed in Biblical knowledge, which we all know is not generally the case, or that they should have facilities ready at hand for the illustration and elucidation of every difficulty. Such a facility is presented by the Explanatory Bible Atlas. It contains 17 beautifully engraved maps, exhibiting the Holy Land at the several distinctive epochs of its history, as well as separate maps of the countries with which it was connected by war or commerce. Thus, we have a map of "Mosaic Geography," illustrative of the period succeeding the flood, and the dispersion of Noah's posterity from Babel; Palestine, in the patriarchal period, before it was conquered by the Hebrews; Canaan, as allotted to the twelve tribes, or Palestine under the Theocracy; the kingdom of David and Solomon; the kingdoms of Judah and Israel; Palestine with ancient and modern names; Modern Syria, &c.* In addition, we have ground plans of the principal cities, engravings of the principal animals and plants mentioned in the Scriptures, and, to crown all, a missionary map of the world.

But the maps and engravings form a small part of the valuable work. It is enriched by a full and complete Gazetteer of the Bible, geographical, topographical, and historical; a Dictionary of the natural history of the Bible; and illustrative essays for each map, in which the well known profound biblical knowledge of the author has found an ample field of instruction for all classes of readers.

Here an important question arises. How can these books be procured for the schools, since their high price (five dollars) effectually excludes them from general use? Various modes might be suggested.—Books like these are not intended for an individual nor for a class, but for general improvement. The whole school is benefited by them. They come under the head of apparatus, or tools for the teacher.—They should be furnished by the prudential committee, whose especial duty it is, in the words of the Statute, to see that "all appendages and things necessary for the advantage of the school be provided."

But, if the prudential committee be too strict a constructionist to view the subject in this light, or too tender of his popularity to dare to venture on untrodden steps, means may still be found to procure this and other facilities for the teacher. No one will hesitate to purchase, if authorized by a vote of the district, and, if this cannot be had, they may be got by subscription. Let but one public-spirited man head the

* An Atlas of this kind for general history is quite a desideratum. We have ancient maps and modern maps; ancient geography and modern geography. That is to say, there are two bright points in the history of our race, the classical era and the present moment. The rest lies in comparative obscurity. How long will our enterprising booksellers allow it to remain so?

list by one or more dollars, and the remaining ten or twelve will follow without difficulty. The books I would suggest as a commencement of such an enterprise are the following:

Worcester's Universal and Critical Dictionary, or }	\$3.50
Harpers' edition of Webster's,	
Jenke's Bible Atlas,	5.00
Martindale's Dictionary of the Bible, about	1.50
A good look for teacher's desk,	50
	\$10.50

These might be followed, in the course of a year or two, by Lempriere's Classical Dictionary, and his Universal Biography, and McCulloch's or Darby's Gazetteer.

Such a collection of books of reference would be of incalculable benefit to a school, since it would not only convey a large amount of information through the teacher, but what is of far more importance, would form a *habit* in the pupils of asking for explanations, at the same time that it showed them where a clear and intelligent answer might always be expected. Every school-room would thus be an oracle, before which those of Dodona and Delphi might "hide their diminished heads."

But such a collection of Books of reference need not be lacking, though the inhabitants of the District as well as the Prudential Committee were devoid of sufficient public spirit to procure them. A teacher could not invest a small sum to greater advantage than in such a purchase. This would be true, if he looked only to his own improvement, independently of the progress of the school. Once in possession of such a treasure, he never would consent to part with it. Besides, even in a pecuniary point of view, he would be no loser. The very circumstance of his owning such tools of his trade would not only entitle him to an advance of wages, but would actually command it.

Surely such a movement as this only wants a beginning. Who will take the first step? Who will set the state so honorable an example!

DYMOND.

For the School Journal.

Leaves from the Life of the School Teacher.

NO. I.—THE FIRST DAY.

Notwithstanding the old adage that "first appearances are deceitful," it is almost invariably the case that the first interview with an individual goes far in forming our estimate of his character. We give his looks and motions some meaning. This fact is of much importance to the Teacher. If he intends to render his stay in a district pleasant and profitable to himself and his pupils, he must pay some regard to first appearances.

And first, it is of consequence that he clearly define the relation, which is to subsist between himself and school. The world is too far along, and human nature too well understood, for a man to suppose it possible to enter the school-room as the despot, making the rod his sceptre, and his own caprice his only law. The true method on this point may be expressed in the following *inaugural*: "We are all of us intelligent and rational beings. You, as pupils, de-

serve the same credit, if you perform your duties honorably, that I do, as your Teacher, if I am a faithful one. To be sure, the spheres we occupy are different, yet this difference is merely factitious, and it is as much incumbent upon you to sustain the characters of good scholars as it is upon me to sustain that of a good teacher. You have as much at stake as I have. We may then consider ourselves as *equals*, as long we severally fulfil our obligations *equally well*. It shall be my motto to treat you as gentlemen and ladies so long as you deserve such treatment."

Here the Instructor places his pupils, if not upon the same, upon an equal, platform with himself. And if he is prudent, one of the first feelings he will strive to develop in them will be that of *self-respect*. And how can this be better accomplished than by the assurance that, so far as they deserve it, they may safely count upon that of their Teacher! For this reason no Teacher should commence his school with prejudices against any of his scholars. Sectional and family feeling in districts are sure to manifest themselves in some *friendly* caution, that "he be on his guard for this or that scholar, as he has always caused some trouble in the school." Never believe any such deductions, until you have had an opportunity to judge for yourself. Former Teachers may have erred in their treatment. But if you really find a notorious school-disturber and defier of all order and discipline, your principal hope is to kindle some spark of self-respect in his bosom. This may be done by occasional expressions of confidence. If at first you hear complaints in regard to his deportment toward the other scholars, express surprise and want of belief in their correctness. And let such expressions be founded upon the high opinions you entertain of the accused, upon his age and advantages. Never *leap* into difficulty. Nor is it advisable to begin with *threats and challenges*. If you treat men as knaves, they will soon believe they are knaves, and will act the knave. One who has lost the respect of society, if he still retain *self-respect*, you may reclaim, but you have no material to work upon if a man has no regard for his own character.

Another idea which it is important to impress upon the minds of your pupils is your *determination* to have a *good school*—even the *best* in town. You will never lose anything by aiming high. There is no danger of over-shooting perfection. I have often requested those of my scholars who wished a good school, and were ready to *help me keep* one, to express themselves by rising. It is not expected that all who rise will, simply from this committal, become faithful and obedient pupils. But you will have placed much responsibility upon them, and if they feel it, this is something gained. Each one will know that his or her *mite* of good behavior must come in to form the character of the school.

Moreover, it should be the design of the Teacher to make the school-house a place of delight, so that when his pupils enter it, they will not come as if *driven* to their task. Here, much depends upon the enterprise of the district. It were easy to show how expenditures, which have heretofore been deemed su-

perfluous, enhance the happiness and therefore the improvement of both Teacher and pupil. If scholars see that their parents feel a desire for their comfort and enjoyment while away at school, they will take interest and pride in their school-room. But not to pursue this idea further. If a Teacher finds the District negligent in this particular, it is for his own interest to provide cheap maps, charts and other instruments for general exercises. But if this be out of his power, his own deportment in the school-room will soon be caught by the scholars. If he comes in cheerfully and takes hold of his labor with zest, his example will find imitators. I have often observed that lively and ingenious teachers do much to impart the same characteristics to their pupils. The converse is also true. If you are negligent of any duties—omitting them, or passing over them slightly—if you are tardy in attendance—if your countenance express distaste and dissatisfaction, depend upon it, these things will not be without their effect upon your school.

Begin your school with ardor, if possible let your duties excite all the interest of novelty. As Yankees say, "Be on hand," and there is but little risk in affirming that your scholars will be energetic and successful.

Middlebury, Vt., April 13th, 1848.

Our Second Volume.

Our second Volume commences with many more orders on hand than we had a year ago, although many large orders confidently expected have not yet reached us. We publish an edition that will *probably* be sufficient; but of our next number we must limit the copies printed to the demand as exactly as possible. Those who wish for the paper, must therefore, order them *without delay*.

We again suggest that care should be taken to have every *Teacher* in the State supplied with the *Journal*, and to enlist Teachers as far as practicable, in efforts to promote its circulation.

¶ We have still a few copies of the first volume on hand, neatly done up in paper covers, which we will send to teachers, together with the numbers of the second volume as they appear, both for 50 cents.

TIME OF PUBLICATION. The *Journal* is to be published the first day of the month. The present number has been delayed a few days by disappointment in regard to paper.

Mitchell's Outline Maps.

Mitchell's Outline Maps have been used for several years past in the Academies and Schools in Massachusetts, New York, Pennsylvania, Ohio, and several other States, to the universal satisfaction of teachers and pupils. They greatly facilitate the study of Geography. They are now recommended by our State and County Superintendents to be introduced into the schools of this State. More or less of these invaluable sets have been already introduced, we understand, into every County in the State. Twenty-four Maps and a Key can be obtained for the small

sum of fifteen dollars. Keys for the pupils at two dollars and fifty cents per dozen.

The Maps and Keys can be obtained in Montpelier by calling on Rev. E. J. Scott, County Superintendent; in Burlington, of J. Sherwood, Esq.; in Charlotte, of E. A. Fuller, Esq.; in Middlebury, at Clark's Bookstore; in Rutland County, of Rev. C. Taylor, County Superintendent; in Bennington County, of Cyrus Farwell, Esq., County Superintendent; in Windham County, of Warren Blanchard, Esq.; in Windsor County, of Rev. J. Wellman, in Proctorsville; in Orleans County, of Austin Norcross, Esq., in Derby; and at County Teachers' Institutes and School Conventions in the State, and of Mr. Charles O. Kimball, who is general Agent for the State, and may be addressed at Montpelier.

Cornell's Terrestrial Globe, the cheapest and most convenient article of the kind for the use of common schools, can be obtained of the above named persons.

How to Teach.

A correspondent of the Northampton Courier gives some very sensible hints on this subject. He says:

"Some, with all their knowledge, have never yet learned what it is to teach. They do not seem to comprehend the nature of their employment, nor to understand what may reasonably be expected of them. They take too limited views of the kind, and amount of labor required of them. Hence some pass away their time barely hearing their pupils recite, parrot-like, what they have committed to memory from the book. Such seem to think that their task is not only done, but *well done*, when their pupils have recited their lessons verbatim,—no matter whether the learners have obtained a single idea or not. I need not say, that they, who pursue this course, should not be called *Teachers*. Yet some such it has been my unhappy lot to find at the head of schools.

"It is the business of teachers to impart knowledge—to communicate ideas—and to train the mind of the pupil to *think*. Hence it is of the first importance, that they should be able to communicate easily and readily to other minds the knowledge which they possess themselves. In doing this, however, it is not their business to solve every problem for the pupil, and furnish him with the direct and full answer to every difficult question. Such a course would be about as unwise as it would be to make a boy go on crutches, when he has sound limbs to bear him through the world."

The above extract contains admirable hints. But, unfortunately, like most advice offered to teachers, it points out no remedies. Let me endeavor to supply the omission.

In place of allowing pupils to recite verbatim from books, they should be encouraged, nay required to give the answer as much as possible in their own language, and the teacher should set the example, by *varying the terms of the question*. Some may think this a matter of trifling importance. But a trial in almost any of our schools will show, that recitations in natural philosophy, chemistry, &c. are too fre-

quently a mere repetition of *words without ideas*, and that the pupil will be brought to a stand by a very slight modification of the question. It would also have a good effect in keeping the mind on the alert, if the questions and answers were changed conversely. Take, for instance, the following questions and answers from Smith's First Book in Geography:

"Q. What is meant by the diameter of the earth, or of any round body?

"A. The greatest distance through it."

Here let the Teacher add, what is the greatest distance through the earth or any round body called?

Again, to the question. "Q. What is wind? A. It is air put in motion." The teacher may add, what is air put in motion called?

With respect to the solution of a difficult problem, the pupil after being allowed a sufficient time for studying it, should neither be directed *how* to perform the question, nor have it worked out by the teacher. The true method is to enable him to *form his own rule*, by the use of a few leading questions. Suppose, for instance, he was puzzled with the following problem as most young children are:—In 15 yards, how many ells English? The teacher might commence by stating, that yards could not be brought *directly* to ells English, because neither of them formed an aliquot [explain if necessary] part of the other. After such an explanation, the following questions would make the matter clear to any child who had been at all trained to think. How many quarters make a yard? Would there be more or fewer quarters than yards in the piece? How then, would you bring the 15 yards to quarters? Bring them then, to quarters. (When this is done,) Now how many quarters have you found in the 15 yards? How many of these quarters will make *one* ell English? How, then, shall you bring these quarters to ells English? (In case he answers *multiply* by 5, say) Will there be *more* ells English than quarters in the piece? Which is the largest? We'll, then, must the number be multiplied or divided? (When the problem is finished, say) That is correct. How did you do it? He will answer in some such words as these, no doubt: I multiplied by 4 to bring the yards to quarters, and then divided the quarters by 5 to bring it to ells English. The teacher may reply, That is your rule; you see you have found it yourself.

If the teachers were prepared for it, such a course as this, steadily pursued, would entirely obviate the necessity of formal rules; and, what is of far more importance, make *thinking beings* of the pupils, and thus transform most of the hard and dry studies of later life into easy and delightful recreations. P.

A person observed to his friend, who was learning to take snuff, that it was wrong to teach one's nose a bad habit, as a man generally followed his nose.

"In some children we are very much deceived at first; we mistake animal spirits for intelligence. Hence it is that promising children who are educated at five years of age, fall into neglect and are forgotten as they grow older. Of all the faculties of children, reason is the only one on which we can depend; if

we cultivate it carefully it always grows with them." —Fenelon.

For the School Journal.

Examination of Teachers and Schools.—No. III.

ARITHMETIC.

1. What is a numeral?
2. How many kinds of numerals are now in common use, and what are they?
3. For what purposes are Roman numerals chiefly used?
4. What is the origin of the characters?
5. What does the capital I represent? why? the V, the X? why?
6. What is the origin of the C and M? of the L and D?
7. What do the following characters stand for, iv, vi, xl, lx?
8. Explain the principle.
9. How many characters are used in the Arabic notation?
10. What is their general name?
11. Which of them are called significant figures, and why?
12. Why called digits?
13. What is the tenth character called? What is its use?
14. Explain the principle by which any number, however large, may be expressed by so small a number of characters.
15. Why is our system of calculation called *decimal* arithmetic?
16. Why are figures divided into periods? Name the periods, commencing at the right.
17. Are the figures in the several periods named alike or differently? Name them.
18. Where is the unit's place when the number is an integer?
19. Where, when the number consists of an integer and decimal fraction?
20. How do you ascertain the denomination of an integral number? of a decimal fraction? of a vulgar fraction? of a determinate fraction?
21. What is the proper character for a separatrix?
22. What is the objection to a comma or a dot for that purpose?
23. Explain the difference, if any there be, between the methods of adding integers and decimal fractions; and also of subtracting, multiplying, and dividing them.
24. In how many ways can $\frac{1}{4}$ and $\frac{1}{5}$ be brought to the same denomination? Which is the easiest and best method?
25. Why must vulgar fractions have the same denomination before they can be added or subtracted? Do they differ, in this respect, from integers or decimal fractions?
26. What is the smallest common denominator of $\frac{1}{4}$, $\frac{1}{5}$, and $\frac{1}{6}$? Explain how this can be found by inspection merely?
27. Find the least common denominator of $\frac{1}{4}$, $\frac{1}{5}$, and $\frac{1}{6}$ by inspection, and explain the principle.
28. Say whether vulgar fractions must be brought

to the same denomination before they can be multiplied or divided, and give the reason why.

29. Multiply $\frac{2}{3}$ by $\frac{3}{4}$, and demonstrate the process.

30. Divide $\frac{4}{5}$ by $\frac{3}{4}$, and give reasons for the process.

31. Can proportion, with vulgar fractions, be performed without division?

32. Perform the following question by inspection, i. e., by a mere glance, after the given numbers are properly arranged, and then explain the process. If $\frac{3}{4}$ lb. of tea cost $\frac{1}{2}$ of a dollar, what will $\frac{5}{8}$ of a lb. cost?

33. Divide 104 by 26, and explain the principle on which the denomination or local value of the quotient is determined.

34. Where do we commence operations in addition, subtraction, and multiplication? Why?

35. Where do we commence in division, and why?

36. All the terms of division are represented in a vulgar fraction. In the fraction $\frac{3}{4}$, point out the divisor; the dividend; the quotient.

37. What is involution? In what respect does it differ from multiplication?

38. What is evolution? In what respect does it differ from division?

39. What is a ratio? a proportion?

40. Are there more than two ratios in a compound proportion? In what respect, then, does it differ from simple proportion? P.

P. S. In the Geographical Questions in the February number there were several errors of the press or pen. As most of them are sufficiently obvious to be corrected by the reader, I shall only notice the two following.

Question 15th, line 3d. for *eastern* read *western*; line 4th, for "S. E. and E.," read "N., E., and S."

Question 40th, for "Colonge" read "Cologne."

Mathematical Questions.

Solution of the 1st Mathematical Question in No. 12.

(Vol 1, p. 184)

$x = D$'s share.

$360 = C$'s share.

$x + 360 = B$'s share.

$2x + 720 = 1000 = A$'s share.

$x + 360 + x + 360 + 2x + 720 = 1000 = 9520$

$4x + 1440 = 1000 = 2520$

$- 1000$

$4x + 440 = 2520$

$- 440$

$4x = 2080$

$x = 520 = D$'s share.

$360 = C$'s share.

$520 + 360 = 880 = B$'s share.

$1040 + 720 = 1000 = 760 = A$'s share.

720

520 = D's,

360 = C's,

880 = B's,

760 = A's,

2520 = A's, B's, C's, and D's. Amount

of property.

Randolph, April 7, 1848. H. C. P.

[J. B. L. of Brookfield, has sent us a similar solution.]

Solution of 3d Mathematical Question in No. 11, (P.

108, Vol. 1.)

BY POSITION.

Suppose 7000 and 8000.

	Months.
7000	$\times 10 = 70000$
3936	—
1376	$\times 13 = 39832$
2560	$\times 5 = 6880$
3936	$\times 8 = 20480$
	67192

2808—1st error.

	Months.
8000	$\times 10 = 80000$
3936	—
4064	$\times 13 = 52832$
1376	$\times 5 = 6880$
2560	$\times 8 = 20480$
	80192

192+2d error.

7000	$\times 2808 =$
8000	$\times 192 =$
	Errors.

22464000	1344000
	22464000

Sum of errors, $3|000|23808|000 =$ Sum of products.

7936 Answer.

Proof. $7936 \times 10 = 79360$

1376	$\times 5 =$
2560	$\times 8 =$
4000	$\times 13 =$
	79360

$7936 \div 79360 = 10$, Number of months.

BY ALGEBRA.

$x = \text{sum}$	$x \times 10 = 10x$
Then $x - 3936$	$\times 13 = 13x - 51168$
1376	$\times 5 = 6880$
2560	$\times 8 = 20480$

BY = OF EQUATIONS REDUCED.

$13x - 23808 = 10x$

Transpose, &c. $x = 7936$. Answer.

E. Randolph, March 10, 1848. S. KEITH.

FARMERS' WIVES IN OLDEN TIMES. The duties of farmers' wives in England, in olden times, were somewhat different and more multifarious than is the case in this country during the present age. In the reign of Henry VIII., Sir A. Fitzherbert wrote a treatise, entitled the "Rock of Husbandry," in which he says:

"It is a wyve's occupation to wynowe all manner of cornes, to make malte, to washe, and wringe, to make hey, shave corn, [reap,] and in the time of neede to helpe her husband to fill the moch hayne, to drive the ploughs, to load hey, corne, and such other. And to go ryde to the market and sel butter, cheese, milk, egges, chickyngs, capons, beeves, pygges, geese, and all manner of cornes."

Be not diverted from your duty by any reflections the silly world may make upon you, their censures are not in your power, and consequently should not be any part of your concern.—*Epictetus*.

THE AGRICULTURIST.

To Prolong Life.

A Scottish Agricultural Journal, speaking of the agricultural laborer, says:

"He, more than the denizens of a town, is exposed to a species of *mental torpor*, the result of the monotony of his employment. From want of mental exercise, the whole nervous system becomes relaxed, and hence we find a *premature dotage* taking hold of the *Hind*, between his 50th and 60th years. He becomes listless, stupid, and *unimpressible*. Life has ceased to have an interest for him, and he vegetates merely. Statistics show that the members of the learned professions, notwithstanding the sedentary life which they are compelled to lead, are as long-lived as the rest of the community; and we know from many examples, that literary men in particular, not unfrequently carry into extreme old age all the freshness and buoyancy of youth! *So much for education!!*"

Doubtless many cultivators of the soil, even in active, wakeful New England, sink into premature dotage from the cause here pointed out. But there is no good reason for it. The means of education, in the first place, are at every one's door. The youth may therefore enter upon life with a cultivated mind,—with habits of mental activity. And then, farming, as it presents itself to the enterprising and intelligent at this day, demands as much activity of mind as any profession whatever. The field of study having a direct bearing upon rural employments is boundless. The encouragements to the application of thought, of science, and of the experience treasured up in books and at the command of the poorest in agricultural journals, meet the farmer's eye in every crop he duly cultivates and at every step he takes in his smiling fields. The observations of to-day stimulate the thoughts of to-morrow. The scientific investigations of a winter evening clothe the field with a fresher verdure the next summer. Even the failure of a crop stimulates to investigation. To the farmer who is determined to understand his own work, his tools, his soils, his manures, his crops, his flocks and herds, there can be no "monotony" in his employment,—no sinking into "listlessness, stupidity, and unimpressableness." He may enjoy all the advantages of intellectual activity that belong to the learned professions, with the superadded one of an active life in the open air.

If farmers, then, would prolong the enjoyments of their freshness and vigor, to old age, and pass into the decline of life with the intellect unimpaired and capable of the quiet enjoyments appropriate to age, let them cherish the spirit of agricultural improvement. Let them be indeed men, and not mere working machines, in youth and through the vigor of manhood.

TRANSPLANTED TREES. Trees transplanted this spring should either be cultivated through the summer by frequent hoeing, or *mulched* immediately. The

latter is both the easiest and best method of carrying them well through the dry season. Cover the ground around them with six inches of litter, and it will prevent the growth of weeds, and keep the soil moist and mellow.

Feeding Corn.

At a late meeting of the New-York Farmers' Club, Mr. Pell presented several fine specimens of Corn, raised on his place—Ulster Co.—five stalks produced sixteen ears. To grow them, Mr. Pell first analyzed the corn, cob, &c.—then examined the soil where deficient in substances essential to the composition of the plant. What was lacking, he supplied, using a large handful of the mixture to every hill. The *sixteen ears* were the produce of only five stalks, from one of the hills; a number had the same quantity.—The stalks accompanied the corn, to show that the roots did not extend far from the stalks, as they found sufficient material for their sustenance in the immediate vicinity.

This exactness of scientific cultivation is not to be expected; but the experiment shows how desirable it is for the farmer to know how to adapt his soil, crop and manure to each other.

CULTURE OF THE STRAWBERRY. A writer in the London Gardeners' Chronicle recommends that the plants be very far apart,—four feet by three. He has cultivated them two feet by one and a half, never allowing a runner more than six inches long. The result is, strong, bushy, hardy plants, and abundant crops of large fruit. The late Mr. Manning, of Salem, one of the very highest authorities, recommended keeping the plants separate, cutting off the runners, &c., as in fact the most *economical* way of raising a given amount of fruit.

A NEW PLOW. The Farmer and Mechanic describes a new plow, the chief characteristic of which is a *revolving* mould board. The inventor says that the work is done one-third easier, the earth is thrown up very much lighter and it can be built cheaper than any other plow, while a dozen can be packed in the space that one of the old kind would occupy.

For the Vermont Agriculturist.

Prospects of the Wool Market.

EDITORS OF THE AGRICULTURIST:—I was glad to see the letter of Samuel Lawrence, Esq., to Henry S. Randall, Esq., published in your paper. It is by such publications the wool-grower becomes acquainted with the wool market. I have no doubt, Mr. Lawrence is correct in saying the consumption of wool will increase as rapidly as the production for many years. I think his estimate too high of articles made of wool now imported into the United States, when he says that "these imported articles will require thirty millions of pounds of wool of a medium and fine quality." I send herewith a copy of the statement I have obtained from the Register of the Treasury, giving the value of woolsens imported into the United States in 1846 and 1847, from which it appears that the whole

amount of the imports of woollens of every description does not amount in value to \$11,000,000. Thirty million pounds of wool of the quality Mr. Lawrence mentions, must cost the manufacturers, as they have paid the last year, more than the value of all the woollen goods imported during the last year.

Very respectfully yours.

JOHN S. PETTIBONE.

VALUE OF WOOLLENS IMPORTED IN THE YEARS ENDING
JUNE 30, 1846, AND JUNE 30, 1847.

1846.

Manufactures.

Cloths and Cassimeres,	\$4,192,310
Merino Shawls,	296,124
Blankets, not above 75 cents each,	165,393
do. above 75 cents each,	468,352
Worsted stuffs,	2,658,023
Hosiery, Gloves, &c.,	638,866
Woollen and Worsted yarn,	266,330
Other articles,	788,027

Paying duty ad valorem, \$9,673,425

Woollen Goods paying a specific duty.

Woollen Flannels,	\$68,775
Baizes,	68,075
Carpeting—Wilton and Saxony,	58,338
Brussels,	171,635
Venetian,	23,570

Total paying specific duties, \$390,393

Total paying ad valorem, as above, 9,673,425

Total woollen goods imported in the }
year ending June 30, 1846, } \$10,063,818

1847.

Cloths and Cassimeres,	\$4,527,742
Shawls and embroidered articles,	745,339
Blankets,	803,914
Hosiery, Gloves, Mitts, &c.,	621,680
Worsted stuffs,	2,924,002
Woollen and Worsted yarn,	128,833
Flannels and baizes,	116,637
Carpeting,	287,864
Manufactures not specified,	840,885

Total for the year ending June 30, 1847, \$10,996,796

Melons.

A correspondent asks for our method of raising melons,—especially trimming the vines. In reply we cannot do better than copy the substance of directions written some years ago by Hon. HORACE EVERETT of this village,—the most successful cultivator we know :

DIRECTIONS.

Holes, 3 feet diameter, 20 inches deep, filled 1 foot with garden rubbish and unrotted manures, beat down hard, and watered, (2 or 3 buckets full,) then filled to the top with rich soil ; on this spread an inch of fine compost or well rotted manure, compact, but not hard. Stick the seeds, (say twenty or thirty to a hill,) the upper end of the seed to be a little below the surface of the compost ; brush over the hill with the hand, so as to fill the holes made by the fingers ; then cover the hill with an inch of clear sand, often watered.

Hills 10 feet apart, 2, 3, and at most, 4 plants only to remain in a hill, and standing apart from each other ; thinned by the time the plants have six leaves.

As soon as the yellow bug is gone, take away the sand and supply its place with soil.

When the plant has six leaves, take off the centre shoot with the point of a sharp penknife, and when the lateral shoots are six inches long, take off all but three ; when these begin to fall to the ground, secure them down with cross sticks ; and as they advance, spade up the ground a foot deep in advance of the vines.

Once in every three or four feet, put a shovel full of soil on a leaf joint of the vine, (not covering up the leaf,) press it down gently with the foot on both sides of the leaf ; if this is kept moist it will take root. The ends of the vines to be kept to the ground by cross sticks.

Let the vines spread from the hills, so as to cover the whole ground.

If the side branches of the main vines are inclined to bend up, and not to keep to the ground, take them off, say a foot from the main vine.

All pruning to be done in the middle of the day, when the sun shines.

Let no melon set within 4 or 5 feet from the root ; and then only one on a lateral branch, 3 to a plant.

Great care should be taken that the vines are not moved or trod upon.

The early but small melons. Let the melon set at the second or third leaf joint from the root, and take the vine off two joints beyond the melons.

To increase the number of canteloupes. Take off all the melons that set within 2 feet of the roots.

Sheep and Wool.

The following remarks were made at a late Agricultural Meeting, at the Assembly Chamber, Albany, N. Y., by Mr. Blanchard, keeper of the wool depots at Kinderhook and Shoreham :

“ *The effect produced upon Wool by the keeping of Sheep.* The condition of the animal should be uniform from the time of one shearing until the next. If this is not the case the effect upon the wool will be injurious ; for while the sheep is fattening, the wool will be of a grosser growth, and the fibre larger ; and when it has become poor, the growth will be less vigorous, and the fibre smaller ; and you have this result, (which will readily be discovered by a practical eye in examining a fleece)—two qualities of wool in the same fibre. I have seen flocks which were well kept for six months after shearing, and then run down in flesh and remain poor until the next shearing, when the outer end of the staple was one full quality in fineness below the inner end ; also when the animal had been well kept at the beginning and end of the year, but poorly kept and run down in the winter, that the middle of the fibre showed the same difference. This not only reduces the quality of the wool in the stapler's scale to the lowest coarsest grade in the fibre, but also makes the fibre weak and tender in the fine part grown when the animal was poor. The result of bad keeping, also, often injures the

health of the sheep, which in addition to the evils spoken of, gives the wool a knotty appearance and tightness near the bottom, which materially reduces the value of the fleece. When the condition of the sheep is good, and they continue vigorous and healthy during the whole of the year, the fibre of the fleece will be free and uniform in quality, and the fleece heavier and more valuable than when they are alternately changing from a high to a low state of flesh. *The fineness of the fibre should be produced by the high blood of the sheep, and not by poor keeping.*

On Washing and Shearing. Before turning out to pasture in the spring, the sheep should be well tagged, care being taken to remove all the locks of wool that would be likely to retain filth. Very early washing often proves injurious; and especially is this true in regard to fine-wooled sheep. It should be delayed until the warm weather has fully commenced, which is usually not until June; then the water becomes sufficiently warm to facilitate the removal of the filth from the wool. Too early washing and shearing often expose the sheep to cold storms and the chilling effects of cold nights, without the necessary covering provided by nature for them; while too late shearing exposes them to the rays of a hot burning sun before the new growth of wool has attained a sufficient length to shield them from its effects.

The manner of washing sheep must necessarily vary, for all have not equal facilities. Pools of stagnant water should be avoided. Better not wash at all, than to have your flocks poorly washed; for if not washed, you arrive at the value of the fleece compared with clear wool by a well known and established rule of discount. The best mode is to use a running stream, or a vat with a stream of water having a fall of a few feet pouring into it. Just previous to washing, the sheep should be thoroughly wet without squeezing the wool, and suffered to stand crowded together for a few hours, until the soapy substance and oil or gum which the wool contains unite; when again taken into the water and the wool squeezed with the hands, the whole of the filth readily separates from the wool and passes off with the running stream. In the common mode of washing, the soapy substance first passes out of the wool only partially uniting with the oil and gum, after which it is impossible to remove the oil and gum, no matter how much time may be spent in washing. Care should be taken to wash the fleece thoroughly in all its parts. I have seen frauds attempted to be perpetrated by washing the back and sides and leaving the belly and skirts unwashed, which in rolling up the fleece was carefully concealed: After washing, the sheep should be suffered to run in a clean green-sward pasture a sufficient length of time for the wool to get dry, which is usually in four or five days, and then shearing commence. Very large flocks should be divided, and the washing done at different times, or they will run too long before being shorn.

The place assigned to the flock when collected for shearing should be well littered with straw and kept clean, so as to prevent the filth, consequent upon their

being close together, from getting upon the wool. In shearing, great care should be taken to keep the fleece whole. Each clip of the shears should sever a part of the wool from the sheep, and a second clip on that part of the animal, or on the part of the fleece just severed should be avoided, for clippings thus made are useless, and a total loss. After shearing, the fleece should be removed to a table or clean smooth place on the floor, with the inner part down; then be gathered up into as compact a position as it occupied when on the sheep; the sides of the fleece should then be folded over, so as to meet upon the back of the fleece; the head and neck thrown back so as to make the fold upon the shoulder; next be folded or rolled from the butt of the fleece and continued until you reach the shoulder. The fleece should then be snugly tied with a small, smooth twine, passing round two or three times. You thus have a compact fleece, easy to open, and the shoulder, which is the finest part, upon the outside. Buyers always expect to see the *best side out*, and wool-growers sometimes do themselves injustice by not thus exhibiting their fleeces. I do not believe that the manufacturers, as a whole, in this country, are yet prepared to pay a sufficient advance beyond the present prices to justify the grower of wool in removing all the frills, belly-locks and skirts from the fleece, as it is done with the fine wools of Germany. I would therefore at present put inside of the fleece all the well washed and clean wool shorn from the sheep—carefully excluding all such locks as are filthy or below the residue of the fleece in condition.

The position is assumed by some, and with a degree of plausibility, that, were a large proportion of the wool growers to turn their attention to the growth of fine wool, the market will be overstocked, and consequently prices decline; but we live in an age of improvement—the tendency of all things is onward. The woolen manufacturers of this country, by reason of their enterprise, skill and long experience, and the improvements in machinery are rapidly progressing towards that state of perfection in their goods which will enable them to compete successfully with the foreign manufacturer. This will lead to a continually increasing demand for such qualities of wool as are adapted to the making of fine cloths and other superior fabrics. The process of raising the standard of the character of the low grade flock is slow and tedious; and I have no doubt that there are wool-growers here who will admit that after a quarter of a century spent in trying the various improvements suggested within that time, that they are only approximating towards that high degree of excellence in their flocks as a whole, which is to be found in some of the choice flocks of Europe. Again, the cases operating to continue the growth of low and medium grades of wool in this country are so numerous, and the supplies of coarse, but not of fine, which will inevitably flow in upon us from other countries, will remove all apprehensions of danger that the relative supply of each will be so changed as to depreciate the price of fine wool."

Plow deep, while others sleep.

PHOSPHATE FOR FRUIT TREES. All fruit trees are much benefitted by the phosphate of lime, (i. e. bone dust,) but the pear especially. Where bone dust cannot be had, bones themselves may be dug in about the roots, and allowed to decompose gradually.—Four-fifths of all the bones from the kitchen are thrown away in the country. If these were saved, and put at the bottom of the holes, when planting pear trees, they would furnish a most enduring supply of phosphate to the roots.—*Horticulturalist*.

TWO TREES. In your yards, set fruit trees—those that will not only furnish a cooling shade but good fruit. Set out the apple, pear, plum, peach, or whatever may be most congenial to the climate and soil.—In the pathway leading from the street to our dwelling house, we have one plum tree that produced last year more than a bushel of the richest plums, the Prince Imperial Gage. Our neighbor, just over the fence has a maple, that cost when set, perhaps, 25 cts.—Our plum cost 75 cts when set.—*Philanthropist*.

To Raise sound Potatoes.

In the last number of our first volume we stated briefly the method of planting and cultivation that experience has shown most promising, for protection against the Potato rot. Below we copy an article that comes from a high scientific source, and the recommendations of which bear the sanction of successful experiment. It will be examined, we doubt not, with care.

Certainly we can by no means advise an abandonment of the potato crop, but on the contrary increased attention to, and a more careful study of it. For a new era in regard to it is about to open upon our mountain towns. They may furnish as good potatoes as any in the world; and will soon find a good demand from the cities, at remunerating prices, for all they can spare, of THE FIRST QUALITY.

From the Boston Courier.

The Potato Disease.

CAMBRIDGE, April 3, 1848.

Dear Sir,—A new work by Baron Liebig, which has just reached me, and which will be issued from the American press in a few days, contains the views of this distinguished author upon the nature of the *Potato Disease*. After its publication in Europe, there appeared in the Journal of the Agricultural Association of Hesse Darmstadt the method of Dr. Klotzsch for the prevention of the disease. This method is such as gives strength to the views expressed by Baron Liebig.

Dr. Klotzsch is keeper of the Royal Herbarium in Berlin, and an eminent vegetable physiologist.

He presented a memorial to the King of Prussia, offering his method to the world, provided he were assured of a remuneration of 2000 thalers (about 1400 dollars.); if, after a three years' trial, it should prove successful.

The memorial was referred to the Minister of the Interior, who requested Dr. Klotzsch to discuss the matter with the College of Rural Economy.

This resulted in the offer of the conditional reward.

I have met with the statement that within the last year or two, some mowers, without intentional good service, spread several swaths through the potato field of a New England farmer, and thus secured, wherever the tops were partly destroyed, a crop of sound potatoes; while every where else in the field the potatoes were infected by the rot.

Another fact of similar character has come to my knowledge. A small farmer on Long Island caused all the blossoms, as they appeared in his potato field, to be picked off. The potatoes, when harvested, were all sound.

These facts acquire new value from the support they lend to the views of Baron Liebig and the method of Dr Klotzsch.

The method of Dr. Klotzsch follows. I can but wish for it a wide circulation, and a faithful trial by farmers and gardeners.

I am very respectfully and truly yours,

EBEN N. HORSFORD.

J. T. BUCKINGHAM.

METHOD PROPOSED BY DR. KLOTZSCH FOR THE PROTECTION OF THE POTATO PLANT AGAINST DISEASE.

The potato, which is an annual plant, represents, in the tubers developed from the stem, the perennial part of a plant; for while the duration of its development is analogous to that of annuals, its sections coincide exactly with those of dicotyledonous shrubs and trees.

The potato plant differs from all those plants which are cultivated for economical purposes in Europe, and can only be compared to those orchideous plants which yield salep, and which are not cultivated among us.

The tubers, both of the potato and of the salep plants, are numerous, and agree in this, that in the cells of the tubers, grains of starch, with more or less azotized mucilage, are collected, while the cell walls possess the property of swelling up into a jelly, and thus becoming easily digestible when boiled with water.

But while the tubers of salep contain only one bud or germ, the potato usually develops several, often many germs.

The potato plant, like all annuals, exerts its chief efforts in developing flowers and fruit. Like all annuals too, it has the power of shortening this period of development, when the power of the roots is limited; as also of lengthening it, when the extent and power of the roots are increased.

We observe in nature, that plants with feebly developed roots often have a weak, sickly aspect, but yet come to maturity in flower and fruit sooner than stronger individuals, well furnished with roots.

In perennial plants we observe a second effort, which is directed towards preparing and storing the nutritious matter, for the consumption of the plant. The preparation of this nutriment is effected by the physiological action of the leaves, under the influence of the roots. The stronger and larger the former are, the more is this preparation of food delayed.

The nutritious matters are stored in the colored stratum of the bark in shrubs and trees, and in the tubers in the potato and salep plants. Not only,

however, the nutrient matters, but also the cells owe their origin to the physiological action of the leaves.

On considering these things, it follows that the potato plant required more care than is devoted to it. Hitherto the whole cultivation consisted in cleaning off weeds, and hoeing up the earth round the stems. Both of these measures are indeed necessary, but they are not alone sufficient—for the plant is cultivated, not on account of its fruit, but for the sake of its tubers, and the treatment should be modified accordingly.

The chief points to be attended to, with a view to the attainment of the object, namely, the increase of tubers, are—

1. To increase the power in the roots, and
2. To check the transformation which occurs in the leaf.

We obtain both ends simultaneously if, in the 5th, 6th, and 7th week after setting the tubers, and in the 4th and 5th after planting out germs furnished with roots, or at a time when the plants reach the height of six to nine inches above the soil, we pinch off the extreme points of the branches or twigs to the extent of half an inch downwards,* and repeat this on every branch or twig in the 10th and 11th week, no matter at what time of day.

The consequence of this check to the development of the stem and branches, is a stimulus to the nutrient matters in the plant in the direction of the increase, both of roots and of the multiplication of the branches of the stem above ground, which not only favors the power of the root, but also strengthens the leaves and stalks to such a degree, that the matters prepared by the physiological action of these parts are increased and applied to the formation of tubers; while, at the same time, the direct action of the sun's rays on the soil is prevented by the thick foliage, and thus the drying up of the soil and its injurious consequences are avoided.

The checking of the transformation in the leaf is equivalent to the interruption of the natural change of the leaves into calyces, corolla, stamens and pistils, which is effected at the expense of the nutrient matters collected in the plant; and these, when this modification of the leaves is arrested, are turned to account in the formation of tubers.

Led by these views, I made, in 1846, experiments on single potato plants, carefully marked, by pinching off the ends of the branches. They were so readily distinguished, in their subsequent growth, from the plants beside them, by more numerous branches, larger and darker foliage, that, in truth no marking was necessary.

The produce from these plants of tubers was abundant, and the tubers were perfectly healthy—while the plants next them, which had not been so treated, gave uniformly a less produce, at the same time the tubers were rough on the surface, and in many instances attacked with the prevailing disease. This

*Any one would be bitterly disappointed, who, on the principle that "there cannot be too much of a good thing," should take off more than is here recommended, in order to use it as fodder.

experiment was incomplete, and did not give a positive result, but it was yet encouraging for me.

In the middle of April, 1847, an experiment was made on a low-lying field with the round white potatoes, generally cultivated here,—a variety which had not suffered much from the disease which first appeared in 1845. The potatoes were planted in the usual way by an experienced farm servant.

After weeding them in the end of May, I renewed my experiment by pinching off the points of the branches of every second row, and repeated this in the end of June. The result surpassed all expectations. The stalks of the plants not treated on my plan were long, straggling, and sparingly furnished with leaves, the leaves themselves small and pale green.

In the next field, potatoes of the same variety were planted on the same day, and left to nature. They appeared in the first six weeks healthy, even strong, but gradually acquired a poor aspect as the time of flowering and fruit approached, and finally exhibited precisely the same appearances as the rows not treated by pinching off the extremities in the field, in which my experiments were made.

The harvest began in the surrounding fields in the middle of August, and was very middling. The tubers were throughout smaller than usual, very scabby, and within these fields, to a small extent, attacked by the wet rot.

In the end of August, the difference between the rows treated by me and those not treated became so striking, that it astonished all the work people in the neighborhood, who were never tired of inquiring the cause. The stalks of the rows left to themselves were all now partly dried, partly dead. On the contrary, the rows treated as above were luxuriant and in full vigor, the plants bushy, the foliage thick, the leaves large and green, so that most people supposed they had been later planted.

But the difference in the tubers was also very decided. The tubers in the plants in the rows treated on my plan were not, indeed, larger, but vastly more numerous, and they were neither scabby nor affected with any disease whatever. A few had pushed, (which was to be ascribed to a late rain,) and were, apparently, incompletely developed, while scab and wet rot attacked more and more the tubers of the other plants, which also fell off on the slightest handling.

Although I am far from believing that I am able to explain the nature of the potato disease which has visited us of late years, yet I feel certain that I have discovered a means of strengthening the potato plant to such a degree as to enable it to resist the influences which determine such diseases.

Should any one be deterred from continuing the cultivation of potatoes, on account of the manipulation here recommended, which may be performed by women and even by children,† I would remind him that the same field planted with potatoes is capable of supplying food to twice as many persons as when employed to grow wheat.

† This communication was addressed to the peasantry of Prussia.

Steeps for Seeds.

In our article on the culture of Indian Corn (Vol. 1, p. 185,) we mentioned a steep that had been tried with great success,—viz. Copperas water, the corn to be steeped in it 18 hours, then turned off, 1 quart of soap added to 8 quarts of corn, and, when planted, as much plaster as will adhere to the corn.

A writer in the *Cultivator* furnishes the following, —which is cheap and easy :—

"In the winter of 1845, I found in the *Philadelphia Saturday Courier*, I think, the following recipe :—
"Soak garden seeds four hours in a solution of chloride of lime in the proportion of $\frac{1}{2}$ oz. chloride of lime to one gallon of water."

On the 10th of May, 1845, having my ground ready, beds made, hills all prepared, so that as little time as possible should be consumed in planting, I put cucumbers, muskmelon, beet, summer savory and radish seeds, and corn, beans and peas into the solution, let them soak four hours, and planted immediately.—Twenty-four hours after planting, I dug up some of the corn and peas, and found that their roots were from one to one and a half inch in length. In forty-eight hours the roots were three to four inches in length.

My cucumbers and melons came up quick and well, and for the first time in my life, my beets were up before any weeds were started. In a garden adjoining mine, planted nine or ten days previous to mine, beans were just breaking the ground when mine were planted, yet mine passed them in a week, my corn came up about the same time, and my beans came up first. I have not marked the exact time of my seeds vegetating since 1845. I know, however, that my seeds do not fail me as they used to do.

This year I did not plant my garden till the 17th of May. Everything that I soaked came up quick, so that my plants were altogether ahead of the weeds, and my cucumbers and melons have kept out of the reach of the bugs, while my neighbors have planted two, three or four times. Two or three of my neighbors have tried the experiment this year with the like good results."

Plant the Best.

There is no way in which so great an improvement can be made, and with so little expense, as in cultivating the best kinds of trees and plants. Therefore the farmer should aim to get the best of everything—trees, plants and vegetables. Some animals will produce nearly twice as much flesh, or dairy products, on the same food as others. Some trees yield twice as much fruit as others, and so great is the difference in fruit, that some kinds sell at a dollar or half a dollar a bushel, while other varieties will bring ten dollars a bushel. Some pears retail at a cent apiece, or less, others at 12 $\frac{1}{2}$ or 25 cents each.

Some potatoes yield twice as much as others, and some are worth twice as much as other kinds, as to quality; and those that yield the least are not always the best, though this is often the case for early use, while those yielding largely, are often best for spring and summer.

Some kinds of corn produce large stalks and cobs, and but little corn. With other varieties, the reverse is the case; and with little attention the farmer may, from the vast number of varieties in the country, and the advantage of producing new varieties, or modifying old ones, get some to suit himself, in the shape and size of the ear, early or late, with a quality that suits, as abounding in oil, starch, &c. Farmers should be cautious and pursue the most economical modes of improvement, and at harvest select the best, and in spring plant the best.—*Boston Cultivator*.

FRUIT TREES. Instead of continuing the old practice of having alternate bearing and barren years, for fruit trees, those who cultivate them would do well to note this fact. When young trees come into bearing for the first time, about the time the fruit is setting, if most of it is taken off and this continued for a few years in succession leaving every year about the same quantity on the trees, they will by the time they have become of sufficient size to be profitable, have acquired the habit of bearing every year.—*Ag. Journal*.

Mr. Pell, of New York, claims to have made his apple-trees bear annually, by laying the bark of the tree open with a sharp knife from the ground to the limbs, and by manuring and culture.

A better mode, than this is, on the bearing year, to remove the fruit entirely, from one half of the tree. The consequence will be that the fruit on the half left will be finer than it otherwise would have been, while the bearing year of the other half will be changed. It will bear full the next year, and thenceforth the two portions of the tree will bear on alternate years. The crop will thus become equalized, and the tree will follow its natural tendency, in each of the separate parts, of alternate production and rest. We know of an apple tree, on which, when young, the fruit was all destroyed on one side by a severe frost, and ever afterwards the two portions of the tree bore full on alternate years.—*New England Farmer*.

SETTING TREES. In some very warm and dry situations, it will now do to transplant trees, but generally, it will not answer for some days yet to come. The best rule we can recommend, in relation to time, is, that it should not be done till the ground, where they are to be set, is in a good condition for planting corn. If set earlier, the earth settles in too compactly about the roots, and they do not do so well. If the getting of fruit soon is an object, select good sized, vigorous healthy trees, even though the cost may be more. The fruit from such trees will more than pay the difference in cost, before the small or inferior trees will bear. The roots should be carefully examined, and where cut off by the spade in taking up, or otherwise marred they should be cut off clean and smooth with a sharp knife.—This gives them a chance to heal over readily, when, if it is not done, they may remain in a diseased state for a long time, to the great injury of the tree. Trees do best that have been transplanted in the nursery. They generally form a considerable mass of fibrous roots near the body, which assists their growth greatly when removed. Such

will frequently grow nearly as well after removal as if suffered to remain where they were.

It is very essential to success in transplanting, that too much top should not be left on the tree. The root is necessarily reduced considerably, and the top should be reduced rather more in proportion than the root. This is generally best done, not by cutting out the limbs, but by taking off from the ends of the branches all but two or three bnds of the last year's growth. If there are limbs which need removing, it may be done, but it is best not to cut them very close, so that after the tree gets well a growing it may be cut again, and then it will heal over better.—*N. E. Farmer.*

The Voice of the Grass.

Here I come creeping, creeping every where,
By the dusty road-side,
On the sunny hill-side,
Close by the noisy brook,
In every shady nook,

I come creeping, creeping every where.

Here I come creeping, creeping every where,
All around the open door,
Where sit the aged poor,
Here where the children play,
In the bright and merry May,

I come creeping, creeping every where.

Here I come creeping, creeping every where,
In the noisy city street
My pleasant face you'll meet,
Cheering the sick at heart,
Toiling his busy part,

Silently creeping, creeping every where.

Here I come creeping, creeping every where,
You cannot see me coming,
Nor hear my low, sweet humming;
For in the starry night,
And the glad morning light,
I come quietly creeping every where.

Here I come creeping, creeping every where,
More welcome than the flowers,
In summer's pleasant hours,
The gentle cow is glad,
And the merry bird not sad

To see me creeping, creeping every where.

Here I come creeping, creeping every where,
When you're numbered with the dead,
In your still and narrow bed;
In the happy spring I'll come,
And deck your silent home;

Creeping, silently creeping every where.

Here I come creeping, creeping every where,
My humble song of praise
Most gratefully I raise
To Him at whose command
I beautify the land,

Creeping, silently creeping every where.

TO HAVE GOOD RADISHES.—Prepare your soil well in the usual way, digging thoroughly and raking smooth—sow your seed upon the top, and cover it with two inches of clear sand. If sand is not convenient, soil taken from below the reach of your plow

and spade, i. e., such as has never been exposed to the air, will answer pretty well.

The Markets.

BRIGHTON MARKET—THURSDAY, May 4.

At market, 340 Beef Cattle, 18 pairs Working Oxen, 35 Cows and Calves, 400 Sheep, and 3300 Swine.
PRICES—Beef Cattle.—Extra, \$7 50; first quality, 7 a 7 25; second, 6 25 a 6 75; third, 5 75 a 6.
Working Oxen.—Sales at \$60, 72, 80, 88 and 95.
Cows and Calves.—At \$19, 23, 28, 32 and 36.
Sheep.—At \$4, 4 75 and 5 25.
Swine.—Lots to peddle 44, 43 and 5c for Sows, 54, 53, and 6c for Barrows; large Hogs, Barrows 43, 5 and 54c. At retail from 6 to 7c.

LIVERPOOL, April 21. Corn market firm, with an advancing tendency. U. S. flour, 27s. 6d. to 28s. Indian Corn, per 480 lbs. 26s. to 29s. Beef and Pork, in good demand at improving prices. Cheese, per cwt. 36s. to 50s. Lard, 30s. to 46s.

WOOL. There is a steady demand for the various descriptions of American wool, in moderate quantities, for the immediate wants of manufacturers. The sales of Pulled wool have been at a slight reduction from former prices. The stock of Fleece wool is not large, but is supposed to be more than sufficient to supply the demand till the new clip comes to market in July. The depressed state of the market for woolen manufactured goods, and the general depreciation in the value of almost every description of merchandise, owing to the scarcity of money, render it likely that the price of wool after the annual sheep shearing will be lower than at present. It will be remembered, that not long before shearing last year, there were considerable sales of wool in market at an advanced price, on account of an apprehended scarcity of the article. For this reason some manufacturers sent their agents into the country early, to buy largely on the best terms; and in one extensive wool growing district, these agents bid upon each other till the price was raised beyond the proper value. On that account the wool was sold in the country, as soon as the clip was taken off, at a higher price than it would command at any time since. For several months past, there has been a gradual decline, and no improvement can reasonably be expected without a loss, and the prospects of the woolen manufacturers of our own country will not warrant the payment of prices higher than were paid in 1846.

Prime Saxony Fleeces, washed, lb.	43	a	45
American full blood,	"	"	38 a 40
do $\frac{3}{4}$	"	"	33 a 35
do $\frac{1}{2}$	"	"	30 a 33
do $\frac{1}{4}$ and com.	"	"	28 a 30
Smyrna, washed,	"	"	16 a 20
do unwashed,	"	"	8 a 14
Bengasi unwashed,	"	"	7 a 9
Buenos Ayres, unpicked,	"	"	6 a 14
Extra Northern pulled lamb,	"	"	34 a 36
Super do. do. do.	"	"	30 a 32
No. 1 do. do. do.	"	"	26 a 28
2 do. do. do.	"	"	20 a 22
3 do. do. do.	"	"	14 a 15

—*Courier.*

The opinions expressed by the Courier a year ago in regard to the prospects of the wool market proved to be incorrect—the prices of some qualities having ranged through the season 25 per cent. higher than the Courier's mark at that time, viz. the prices of 1846.

Book Farming.

I had five or six acres of land overrun with johnswort, and being convinced it could not be subdued by cultivation I esteemed it of but little worth. I was directed by an Agricultural paper to sow one and a half bushels of Plaster to the acre, two years in succession, and assured that this would run it out.

I procured a bushel of Plaster, and sowed it early in the Spring. It brought in a thick coat of white clover and for three years past very little of the weed has appeared. The extra feed three times paid the cost of the plaster. Thus raising the value of the land \$15 or \$20 dollars per acre.

This weed grows on land adapted to plaster.

Again—some part of my farm was so overrun with the Canada thistle, it was deemed of little worth. I found I could not subdue them by cultivation; and being directed by an Agricultural Journal to mow them when in full blossom, I tried it on several small patches, and for five years past have made a practice of going over the whole farm, and have almost entirely exterminated the noxious weed from it. Thus raising the value of my farm at least 20 per cent.

Thus much for book farming, so much neglected.
—Vergennes Vermonter. REUBEN WHEELER.

STRAW FOR THE POTATO ROT. Mr. SKINNER read an interesting extract of a letter from Hon. D. W. Naill of Maryland. He would not have occupied time by calling attention again to this well-worn subject, had this extract not appeared to possess that for which it had been his rule to seek, through life, in all his inquiries in relation to Agriculture, viz: specific and practical information of importance. The extract given, stated that a gentleman of Frederick County, Md. last spring procured some sound potatoes for planting, from Mr. Naill. Mr. N. had just been informed by that gentleman that he manured and prepared his land and planted the sets 3 to 4 inches deep, covering them with earth, in drills, about 18 inches apart, placing the tubers about one foot asunder in the drills, and immediately gave the whole surface a covering of straw from three to four inches in thickness. The covering of straw prevented the growth of weeds and superseded the necessity of cultivation. The result was an excellent crop of sound potatoes, so far as they were covered. Those left uncovered suffered with the Rot.

Had it not been for the last six words, said Mr. Skinner, he would not have troubled the gentlemen present by reading this extract—nor, but for that, would Mr. Naill have made the communication—because it would have remained questionable whether the crop would not have been round *without the covering*!—and this he took to be the sort of matter-of-fact, practical information which New-York farmers and all other agriculturists wanted, and which it would become all agricultural clubs to send abroad, instead of mere generalizations.—N. Y. Farmer's Club

HOW TO ENLARGE VEGETABLES. A vast increase of food may be obtained by managing judiciously, and systematically carrying out for a time the principle of increase. Take, for instance, a pea. Plant it in a

very rich ground. Allow it to bear the first year, say half a dozen pods only. Remove all others. Save the largest single pea of these. Sow it the next year, and retain of the produce three pods only. Sow the largest one the following year, and retain one pod. Again select the largest, and the next year the sort will by this time have trebled its size and weight.—Ever afterwards sow the largest seed. By these means you will get peas (or anything else), of a bulk of which we at present have no conception.—*Ex. pap.*

Domestic Economy.**A VERY STRONG WATERPROOF GLUE.**

For Sign-boards or articles exposed to the Weather.

Take common glue, and after preparing it in the usual manner for using, add gradually about one-eighth in quantity of boiled linseed oil, stirring it until it becomes thoroughly mixed.

A small quantity of powdered chalk added to common glue, also makes a very strong and excellent cement. Another that will resist the weather, may be prepared, by adding two quarts of skimmed milk to half a pound of common glue.—*Farmer and Mechanic.*

LIP GLUE.

For cementing Paper, Silk, thin Leather, &c.

Take of isinglass and parchment glue, each one ounce; of sugar-candy and gum tragacanth, each two drachms; to which add an ounce of water, and boil to the consistence, when cold, of common glue. It can then be formed into small rolls, or any convenient form for use.

This glue when wet with the tongue and applied to the edges of paper, silk, &c. will, on their being laid together, and suffered to dry, unite them as firmly as any other part of the substance.

FISH AND VEGETABLES. Sir Humphrey Davy tells us that the reason why vegetables and fish should be plunged in boiling salt and water, is, that this solution boils at a higher temperature than plain water, and that the sudden scalding fixes the albumen, mucilage, and other nutritive parts of the viand, instead of their being macerated and sodden, and so partly lost in lukewarm water.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by

BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy,	- - - -	50 cents.
5 copies, sent to one address,	- -	2 00
10 " " " " "	- -	3 00
16 " " " " "	- -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. II.

WINDSOR, VT., JUNE, 1848.

No. 2

THE SCHOOL JOURNAL.

For the School Journal.

Moral Education.

NO. V.

In the last number, the use of the Bible in the common school as one of the means of moral education was fully considered, and means were pointed out whereby its use might be rendered effectual and beneficial. In every Christian community, the Scriptures lie at the foundation of morality. But, as was sufficiently shown, the mere reading of the Bible is in itself of no avail. There is nothing in the mere sound of the words that can operate as a charm. This, of itself, can neither cultivate proper affections, nor meliorate the heart. If a beneficial effect is intended, the reading must be intelligent. Sense must accompany sound; ideas must be excited by the words, or the whole exercise is as unavailing as sounding brass or tinkling cymbals. The habit of uttering words without thought is easily formed, and almost impossible to be broken, as every student can testify.

But, in the moral education of youth, we must not trust exclusively to the reading of the Scriptures, however well that may be done. For with a few exceptions, the ethical portion of the Bible may be read, but to the intellect it is a sealed book before the eighth year; while for moral education, if we would have it effectual, if we would not impose on ourselves a task alike wearisome and impotent, we must have a firm foundation laid long before this. A profound practical writer, Dr. Evanson, says, "that, during childhood (i. e. until the 8th year) education should have for its main object the cultivation of the Moral faculties." And in another place he says, "Moral education commences at the earliest period of infancy, and we almost believe it is finished, for good or for evil, before the individual passes from the period of childhood. In moral qualities, the child is indeed father to the man." If this be true, and I imagine few who have closely examined the subject will doubt it, how can we wonder at the failures we meet with? We commence long after the period when we ought to have finished. We give free scope to the adversary to sow his seeds, we wait till his plants have attained a towering height, till they have struck deep root into the virgin soil, and then, forsooth, we complain of the difficulty of eradicating them, or abandon the task in despair.

Nor is this all. Every careful reader must have observed, that the Bible does not claim to be man's

sole teacher, or even his sole moral teacher. It makes frequent allusions to two other revelations of God's will to man, nature, and the conscience, both of which are necessary to its correct interpretation. How often is the *Book of Nature* alluded to in the Scriptures, from the glories of the mighty firmament, with all its resplendent orbs, to the humblest flower that embellishes the meadow! In that revelation alone is proved the existence of God. The Bible does not demonstrate, does not even declare it. Take notice how it commences. "In the beginning, God created the heaven and the earth." As if it were to say, it is unnecessary to show that he is. You have seen and known that for many years. That is sufficiently shown in my other revelations.

The same remarks apply with equal force to the Bible ethics. Cain had no formal precept forbidding him to kill. That was contained in the revelation which Paul says is written on the hearts of all, Jew as well as Gentile. Again, there is no precept in the Old Testament regarding prayer. Yet Jesus commences his instructions on that point, not by commanding us to pray. No. He presupposes that to be taught by the universal revelation alluded to by the Apostle. He begins by saying, *When thou prayest, &c.* In fact the Scriptures everywhere assume that man will use his intellect to discover and perform many duties which they have not fully unfolded. The Bible says, "Train up a child in the way he should go; and when he is old, he will not depart from it." But it does not describe, with practical minuteness, what that way is, else every incompetent schoolmaster, every weak, imprudent mother, must have sadly neglected its study.

Hear what Archbishop Whately, a man not less eminent as a theologian than distinguished as a philosopher, says on this subject. "God has not revealed to us a system of morality such as would have been needed for a being who had no other means of distinguishing right and wrong. On the contrary, the inculcation of virtue and reprobation of vice in Scripture, are in such a tone as seem to presuppose a natural power, or a capacity for acquiring the power to distinguish them. And if a man, denying or renouncing all claims of natural conscience, should practice, without scruple, every thing he did not find expressly forbidden in Scripture, and think himself not bound to do any thing that is not there expressly enjoined, exclaiming at every turn—

'Is it so nominated in the bond?'

he would be leading a life very unlike what a Christian's should be."

In our efforts, then, to train youth "in the way they should go," it is evidently our duty to use *all* the means that God has put in our power for their moral improvement, and not to confine ourselves exclusively to the reading of the Bible. The Scriptures are essential, they should form the foundation of all our teachings, but they were never meant to be relied on exclusively. The cultivation of the conscience, good example, and all other legitimate instruments should be summoned to our aid. I proceed to notice the next in order.

II. *The development of the conscience.* "The great criterion," says an eminent writer, "which distinguishes man from the lower orders of creation, is CONSCIENCE, a sense of DUTY, a knowledge of RIGHT and WRONG. This, however, like his other capacities, is undeveloped at birth. It requires the aid of outward circumstances to unfold it. The great purpose, then, of all good education is to bring about this development, to make a man *master of himself*, to excite him to act from a *principle in his own mind*, to lead him to propose his own perfection as his supreme law and end." But how is this great purpose to be effected? By awakening the Conscience; by giving it due activity, by regular, daily *exercise*, and thus establishing the pre-eminence and authority which belongs to it among the faculties of the mind. The conscience exists in every child. But in too many it sleeps. It has become torpid from utter neglect. "The fire kindled by the hand of God still burns. It is not extinguished, though it may give no light." It is only dim or smouldering from want of a little care. What shall be done to raise it to a flame? All that is necessary is to address it directly, to set it to work. This must not be attempted by dull dissertations, however, or sermons on duty, but by *appropriate questions*, which shall excite it to action, and thus bring out the ideas which God himself has placed there. We have beautiful examples of this in the New Testament.—When the GREAT TEACHER had spoken certain parables, he asked, "Whether of them twain did the will of his father?" and "Which now of these three, thinkest thou, was neighbor to him who fell among thieves?"

In a former number, I adverted to the difficulty arising from our teachers being unqualified to carry out these important principles, and to the necessity of providing assistance for them in that respect. I also noticed the facilities furnished by the Normal School Society in the form of Reading Books especially devoted to the important object of enlightening the conscience, and investing it with authority, energy and activity. I now propose to show more distinctly the manner in which this is done.

The work is entitled "the Moral Instructor; or Culture of the Heart, Affections, and Intellect, while learning to read." It consists of simple lessons, gradually progressive, and so well suited to interest the feelings of childhood, that it has been alleged against it as a defect, that children are *not willing to lay down the book*, and generally read it through and through long before their turn at school.* But, if one

of the chief objects of education be to *create an interest* in study, an intelligent mind will scarcely view this peculiarity as a blemish.

The distinguishing feature of the work, however, lies in the direct appeals to the conscience of the child which pervade every part of the book, and to which the questions at the end of each lesson are more especially devoted. In order that a *habit* may be formed of *viewing every object, and every thought, in a moral point of view*, the inquiry, "Is this right or wrong?" is one of perpetual recurrence. Take, for example, the first lesson, which consists, of course, of but a few easy words: "*Boy. A good boy. A bad boy.*" This naturally leads to the following inquiries from the teacher, which the child answers impromptu, without the least hesitation: "Is it the good boy, or the bad boy, who minds what his father and mother tell him? Will a good boy ever disobey his father or mother? When do you feel happiest, when you are a good boy, or when you are a bad boy? Which kind of boy is it that God loves, the good boy, or the bad boy? What kind of boy is it that every body loves? Can you love a bad boy?" Part I. p. 20.—The important lesson of kindness to animals is next brought out, and placed on the footing of Duty to God. "Cat. A black cat. A white cat." "Who made the cat? Do they all belong to God, then? Do you think he will be pleased if you strike or hurt a cat? Is it right to hurt her, if she does us no harm?" &c. p. 21.

A bare enumeration of the titles of the Moral Lessons on which the conscience is thus exercised would fill too much room. Referring parents, therefore, to the book itself for more extensive details, I shall only notice some of the more important topics, such as the omnipresence of God; obedience to parents; the vast importance of strict unexaggerated truth; the nature and function of the conscience; and the necessity for purity of thought as well as of word and action.

Omnipresence of God. No one, even in the feeblest exercise of the thought, "Thou, God, seest me!"—none, surely, while fully realizing that the eye of his Maker is fixed upon him; that, if he does this or that wicked act, he does it before his God, and in violation of his laws, can knowingly commit sin. How important, then, that such a thought should become habitual in childhood! Exercises on this idea are to be found from the beginning to the end of the work. The young children are asked, after reading an appropriate story, "Does God see children when they are at school, and when they are at home; when they are at work, and when they are at play? Does God always see us? Does he always hear what we say? Does he know what we are thinking of?" Again, "Do you think John would have done that, had he recollected that God was looking on?" To the older classes, after a story in which the wonderful instincts of animals and vegetables are adverted to, and the children led to observe of their own accord, that these can be nothing else but the direct movements of the Creator, the following questions occur: "Does God know every thing that we do, or say, or think? Is he everywhere? What good book tells us this? How do people that have not the Bible know it? How do

* Several female teachers have told me, that it is no uncommon thing for a class, at the end of a recitation, to ask permission to "read a little more."

little chickens show that God is everywhere? How does the young lamb show it? How does your own body show it? How do trees show it? How do house-plants show it? How do pole-beans show it? How do peas and grape-vines show it? Could little children find out such things themselves? How? Is it pleasant or unpleasant for good people to know that God is always in them and around them? Is it pleasant or unpleasant for the wicked to know it? Do you think you would ever do wrong, if you always recollected that God was by? Would you think of any thing wrong, if you recollected that God knows your thoughts? What should we try to do, then, that we may always act and think right?"

Obedience to parents, and family harmony. The child who has been trained to implicit, hearty, and ready obedience to parents on true principles, as his ideas expand will naturally, almost without effort, extend the same affectionate and submissive spirit to his Heavenly Father. Here lies the root of virtue. Alas! how little of it is to be seen among our youth! More or less exercise for these affections and duties are to be found in almost every page of the Instructor. To the third lesson, for a mere beginner, these questions are appended:—"Is it right or wrong for brothers and sisters to quarrel or strike? How should brothers and sisters treat one another? Will God love them if they do so? Will their father and mother be pleased if they quarrel? Is it right or wrong for you to make your father and mother unhappy? Do good children always try to please their parents?" Again: "Is a hen very careful of her chickens? How does she keep them warm at night? Are your parents as careful of you? If your father and mother had not taken good care of you, would you have been alive now? Who gives you food and clothes, a house to live in, and a bed to sleep on? Should you not be grateful to them, then? Should you not love them very much, and do at once whatever they tell you? Is it right or wrong for children to grumble or cry, when they don't get what they want? Will God love any child who does not obey his parents? Does God always know whether we love and obey them? Will trying to please their parents make children more happy or less happy?"

Truth. The whole range of the virtues may be said to be comprehended in the one simple idea, *truth*. For, in the first place, no one can *claim* to be a true man who is addicted to any vice. In so far as he offends, he virtually denies the law of his nature, he *acts a lie*. Secondly, an open, candid, sincere, man, a man entirely free from falsehood, can hardly be vicious. True, he may err. But his errors can only be momentary; repented of and forsaken as soon as they become known to him. Can such a characteristic as truth, then, be overvalued? After a story of an ingenuous little girl, in which the inevitable consequences of lying are fully developed, the conversation with the reader's conscience naturally follows: "Why does Mary never tell lies? Why is she never afraid of any body? Are liars always cowards? How does Mary act when she finds she has done wrong? How will she feel after doing this? Would

you feel happy if you were to do so? How shall we be sure never to be confirmed liars? Is that the only way to be sure of it? Why? Are people ever wicked without being liars? Are thieves always liars? Why are wicked people always liars? Can liars ever feel easy and happy? Is it ever right to deceive? Can people tell lies without speaking? How? Is there any difference between acting and speaking a lie? Does one sin generally lead to another? How? Does a lie ever stand alone? Can we lie, and use words that are true?"

Purity. "It is the *actually accomplished deed*," says one of the most amiable and beautiful modern writers, "which raises or sinks us in the eyes of the world. But it is the first *thoughts*, the first *impure feelings*, it is these we should fear, it is against these we must combat. Watch over the feelings of the heart, for it is these, which, if pure, sanctify and give you worth, properly speaking; but which, if they be impure, drag you down to the dust, and make you despicable, even *without* the commission of the bad action. Oh, how difficult to purify what has once been stained!" How anxiously, then, should we strive to keep the white robe of infancy pure!—This is attempted by such inquiries as these, scattered through the Instructor. "Is it sinful to *contrive* how to deceive?" "Does God know what we *think*, as well as what we *do*?" "Is it right or wrong to allow ourselves to *feel* revengeful? How can we *help* feeling so?" "Is it right, or wrong, to *think of* taking what does not belong to us?"

The proper training of the moral sense is one of the most important departments of education. The conscience is liable to be overborne by *desires* and passions, while its proper place is to regulate and control them; and, like the voice of God in the soul, (which in fact it truly is) to say to them with decision, "Peace, be still." It must be trained, expanded, and elevated, however, or it cannot do this.—Above all, it must be continually *exercised*, especially in early youth, or it will certainly become torpid and useless. Be assured, that *first* impressions are all in all. We may feel a strong desire to do something wrong. But, if we have been so often exercised in this way, that the question "Is it right or wrong," habitually rises in the mind, will it produce no effect on the conduct? And even if it should produce good occasionally, will it not be apt to extend? Get a child *once* to do a thing simply because his conscience told him it was right, and have you not wrought a great work in that child? Will he be more or less ready to seek and follow justice and truth? Will it, or will it not, think you, fit him for that perpetual progress which is the duty of all? Can virtue, indeed, exist, where the question "Is it right," does not, in some form or other, habitually occur? There may be more or less absence of vice, but nothing deserving the name of virtue, which always implies *exertion*, *resistance*.
DYMOND.

P. S. I would advise, in place of the questions in the Moral Instructor being read by the teacher, and answered by the pupil, that the latter both read and answer them. As there are no answers given in the

book, habits of close attention to what they read are thus generated in the scholars. A single word should never be received as an answer. A complete sentence should always be insisted on. Thus, to the question, "Is it right or wrong to do so and so?" the answer should not be "right," or "wrong;" but "it is right [or wrong] to do so and so." By this means the young child is preparing himself for composition, and creating a habit of clear and definite expression.

D.

For the School Journal.

Leaves from the Life of the School Teacher.

NO. 2.—GOVERNMENT.

Unless one is content to pass a wretched life while instructing, securing neither his own respect nor that of his scholars—unless he is satisfied with what *intellectual* discipline his pupils may derive from their books, careless of that *moral* training which always accompanies a well ordered school, he must arrange for himself some system of Government. He must have some regulations, and penalties affixed to their violation. Not that it is advisable for him to present a long list of rules, and post them up as the standard of all discipline. The diversities in human nature are too great, to render such a course politic. What might be a severe punishment to one, would produce the opposite effect upon another. A simple word, or a look of disapprobation, will be remembered by an affectionate pupil, much longer, and to a better end, than the severest corporal infliction. And here, it might be proper to suggest, that it is of the highest importance for the Teacher to *study* the characteristics of his pupils. They should not all be treated alike. And this method, instead of being *partial*, is the only sure way of being *impartial*. There is a great call for judgment, in regard to the particular *form* of punishment, to be employed upon different offenders. And the only means of judging correctly, can be derived from intimate acquaintance with the peculiar mental structure of his scholars. If he is careless, he may uselessly engender in their minds, a feeling of aversion, which no future amends can eradicate.

Another reason against presenting a code of laws, is the following. Scholars object to the outward appearance of restraint. It partakes too much of the nature of fetters and manacles. Consequently, they will appear *tangible*, and they will be more likely to run the risk of violation. In this boasted land of freedom, they will not suffer the least encroachment upon their "inalienable rights," if the attempt bear its character upon the face of it. But arising from the human constitution, there is another, and more powerful means of restraint. I refer to *spiritual* government. Scholars will allow the veriest *spiritual* despotism. Let a Teacher exhibit intellectual and moral superiority, together with affection for them, and a desire for their interests, and what before was irksome and almost impossible for them to perform, becomes at length an agreeable duty. The tap of a Caesar's finger is said to have awed the Roman Senate. Not, we imagine, from any fear of his personal power, but from an involuntary feeling that there was something in him worthy of being obeyed.

There are a number of qualities which a successful government must possess, some of which I will notice. And first, it must be strict. What few general principles a Teacher sees fit to lay down, must be closely adhered to. It will not do to be lax to-day and precise to-morrow. There must be consistency. I had almost said, *no government* at all was better for scholars, than a weak yielding at one time, and severity of exaction at another. Such conduct takes away all the appearance of reason, as a guiding motive. And here, oftentimes, a Teacher must contend with his own infirmities. We all have marked the different feelings with which we enter the school-room on different occasions. I fear our pupils may have cause to remember it too. "How cross the master is to-day." "I didn't dare to stir all day." Such are the expressions that we sometimes overhear.

And we must also guard against the other extreme. If we are peculiarly pleasant and easy, the scholar soon perceives it, and is ready to take the advantage it affords him. I would not be understood to maintain that a teacher can and should always be in the same frame of mind. To some it is comparatively easy, to others, impossible. I only mean that so far as he is able, he should be uniform in his appearance and deportment. He should neither be a cold column of marble, which his scholars fear to approach, nor should he be so loose in discipline, that they will entertain no respect for his regulations. There is a "golden mean" which he should attain.

He should avoid continual threatening. If he is understood to desire or forbid a particular course of conduct, this is enough. If he sees an intention of infringing upon his regulations, he should meet it promptly and boldly. Speedy infliction of penalty will manifest his determination to be obeyed; whereas if he puts it off until some future act of delinquency, his pupils begin to think he is not in earnest, and only intends to *scare* them. Much of the effectiveness of discipline is lost in this way. There is, no doubt, a dislike to inflict punishment, in the mind of every humane teacher, but the good of the whole school and of the individual scholar must often compel him to sacrifice his personal feelings.

Moreover, the scholar should understand and feel, that he is punished not from vindictiveness, but for his own benefit. If he suppose he is punished to gratify revenge in the teacher, he will fail to display any mark of humility or sorrow. He will "stand it out" as bravely as possible. But if he sees that the very act performed by the teacher is painful to him, and that the necessity of maintaining government is its origin, he will neither feel enraged at him, nor can he refrain from regretting his misbehavior.

It may be necessary to say, that when I speak of punishment, I do not mean any particular kind. The particular circumstances must guide the teacher in his selection of the method to be employed. It is my impression that it is next to impossible to avoid entirely some appeal to brute force, in conducting some of our country schools. In conclusion I would say; Be not over-hasty—Understand the circumstances of the case, and if possible the motives of the delinquents—Remember, the act you are about to perform

must produce either a good or bad effect, and use your endeavors for the former. Let your demeanor be such, that your scholars will never forget it, and will even love you the better, for the momentary pain you cause them. Such a thing is possible.

May 17th, 1848.

For the School Journal.

Education in Louisiana.

The new constitution of Louisiana provides for the establishment of free public schools throughout the State, with the means for their support; for a University at New Orleans, composed of four faculties, viz: one of law, one of medicine, one of the natural sciences, and one of letters; and for a Superintendent of Public Instruction, who shall hold his office for two years.

To carry out these provisions, the legislature has passed laws which will secure a very efficient system of common schools throughout the state. Its principal features are as follows:—

The State Superintendent is appointed by the executive, and receives a salary of \$3000. He is required to visit the different parishes, inspect the schools, and by lectures and communication to diffuse a knowledge of existing defects, and desirable improvements. He is to collect statistical information, direct in regard to books and studies, prepare forms for journals and returns, and report annually to the Legislature.

Parish Superintendents are elected by the people and have a salary of \$300. They are to examine all teachers and give certificates of qualifications and moral character; to visit and examine schools; in connection with police juries to divide the parish into school-districts; to examine accounts of school directors; to receive from the State Superintendent the portion of public money for the parish, and divide it among the districts pro rata of the white children between six and sixteen years of age.

Each district shall choose three Directors, one of whom shall be designated as clerk of the board and the district. The board of Directors are in the nature of a body-corporate for holding district property and transacting all business of the district, building school houses, and keeping them in repair, hiring teachers, (but to pay only those that have certificates); to establish rules for government of schools; to suspend or expel refractory pupils after a fair hearing; and to report to the district at the close of their term an account of their official proceedings.

Teachers are not to instruct in any branch for which they have not a certificate; are to keep a journal (the form being prescribed by the State Superintendent) of the names, ages, attendance, and studies of their scholars; the names of their parents or guardians; the visits of Superintendents and Directors; to deliver the journal to the clerk at the end of the term, or an abstract of it once in three months; and not to receive more than two-thirds of their wages until these requirements are fulfilled.

For sustaining the schools, the Legislature has sequestered as a fund, whatever the State may receive

from the sale of public lands, from property granted or bequeathed to the State, escheats, &c.; on the aggregate of which, the State shall pay six per cent. interest for the support of schools. For the same purpose, a tax of one mill on a dollar on all the taxable property in the State, is to be raised annually. This tax is all, or nearly all, that is at present available, and amounts to nearly \$250,000. The whole number of children entitled to attend school is about 41,000, of whom it is supposed not more than 35,000 can at present be collected into the schools, and the appropriation is therefore equivalent to about \$10 for each scholar, or \$400 a year for a district of 40 scholars.

The first movement in the cause of free popular education was in New Orleans; and the schools in that city will now compare favorably with those of any part of the union. About six years ago, under a special act of the legislature, a board of education was organized, and a system of public instruction adopted, which has not only resulted in bringing a multitude of children into the schools, but has given an impulse to the cause through the State. In the Second Municipality the board employed Mr. Shaw of Bridgewater, Ms., an experienced and successful teacher, as Superintendent; but at the first opening of the schools only thirteen scholars were present. After a month of almost constant exertions, there were collected about 350 scholars, and at the close of the year there were 840 in attendance. The number has increased until in 1847, out of nearly 5000 children over 2300 were in attendance, and this perhaps is an average of what has been accomplished in the first and third municipalities. The schools are divided into three classes, the *primary*, in which are taught reading, spelling, arithmetic, writing on slates, &c.; the *intermediate*, in which all the common branches of English education receive attention; and the *high schools* in which are taught the higher mathematics, the languages, and the natural sciences. Very liberal appropriations are made by the municipal authorities, not only for the support of instructors, but for building school houses, the purchase of apparatus, &c., but hereafter they will receive, as their proportion of the State tax, ample provision for sustaining their schools on a liberal scale.

This State has taken a stand in favor of sustaining the great cause of popular education far in advance of her sister States, at the South, and it is to be hoped that her example may be followed by them.—There is doubtless much difficulty in securing the benefits of a general system to all the children on account of the sparseness of the population; but the object to be gained is of sufficient importance to demand very great exertions to overcome existing difficulties which though of a serious character, Louisiana will show are not insurmountable. J. P. F.

INSTINCT OF PLANTS. Hoare, in his treatise on the vine, gives a striking exemplification of the instinct of plants. A bone was placed in the strong but dry clay of a vine border. The vine sent out a leading or tap root, directly through the clay to the bone. In its passage through the clay, the main root threw out no

fibres, but when it reached the bone it entirely covered it, by degrees, with the most delicate and minute fibres, like lace, each one sucking at a pore in the bone, like a litter of pigs tugging at their dam as she lies down on the sunny side of the farm yard. On this luscious morsel of a marrow-bone would the vine continue to feed, as long as any nutriment remained to be extracted. What wonderful analogies there are running through the various forms of animal and vegetable creation, to stimulate curiosity, to gratify research, and, finally, to lead our contemplations from nature, in a feeling of reverence, "up to nature's God!"

As to the vine spoken of by Hloare, it is worthy of remark that the root went no further than the bone, which it seemed to have literally smelt out, as would a hungry dog, in passing.—*Phila. Sat. Courier.*

For the School Journal.

Moral Education.

Although my own opinion seems of little value, I may not be doing harm by saying that a year's acquaintance with the Journal has not lessened my esteem for it. On the contrary, I have thought I could discover something in the latter numbers that had increasing claims upon the approbation of those who *really* feel an interest in the improvement of our schools. The articles that have lately appeared on the subject of MORAL EDUCATION I have been much interested in reading, and I have supposed it probable that many of our teachers are well convinced of the importance which this department of education possesses. Still it is one thing to be convinced of the necessity of a thing being done, and in most cases quite of as much importance to know how to do it.

We have a right, without impeaching the moral principle of the teacher, to regard him or her as laboring under no small amount of disadvantage while endeavoring to give decidedly a moral feature to the school, from the want of a *precedent* to which to refer as authority. How few can point back to the schools in which they received instruction for a specimen of that kind of school which they feel convinced many of their best friends are desiring to see under their care, and which they would themselves delight to have!

Many of our teachers, doubtless, enter upon their charge with good intentions; but in spite of those good intentions—in spite of their convictions of duty—how many are thwarted in their praiseworthy plans, by the want of some convenient opportunity, some friendly accident, by which they could, without exposing themselves to the contumely which they fear would otherwise follow, introduce that system of moral training among their scholars, which their better judgement assures them is needed! This difficulty would undoubtedly be in a great measure obviated if Palmer's MORAL INSTRUCTOR would be used, agreeably to the resolution passed at the School Convention held at Montpelier in 1846, in relation to that book. The judicious selection from the Scriptures, of passages applicable to the lesson, is not among the least of its recommendations.

With this book in the hands of the scholars, and an assurance in the mind of the teacher, that it absolutely forms no inconsiderable part of his duty to give more special attention to this department, it is reasonable to expect much good would be the result.

Yours respectfully,

H. M.

School Houses, again.

In our first volume (p. 179) we published a communication asking from the STATE, or one of the COUNTY SUPERINTENDENTS, a plan for a School House,—with a brief sketch of a plan in reply. We have just received inquiries on the subject from another quarter, which we have room only to insert with the promise that in some way they shall receive attention in our next. The extract, as here published, contains hints which those who are about to build school houses should attend to.

EXTRACT.

"Will you in your next number give us a plan of a Model School House?"

There are many school houses built in the State of Vermont every summer, and it is essentially important that they be built *right*. But it is very evident that many people, who justly appreciate all the improvements in modern architecture as far as relates to dwelling-houses, have no idea that school houses are susceptible of like improvements. In this one thing alone they seem content to follow in the old beaten track of their fathers.

There are twelve school districts in this town. Every school house, I believe, as far as it extends, fences the highway. There are no pleasure grounds connected with either of them. Not one has anything connected with it, either in location or in internal or external arrangement, that renders it pleasant, attractive, or inviting. They are generally very small and very low. Most of them, internally, are furnished with two long seats on each of three sides, with a desk in front of the back seat.

We are to have one school house built in this town this season, I believe; and as we have no fit model in this vicinity, I am afraid they will pattern after a bad one.

Now will you give us some suggestions as to the suitable dimensions of a House, designed to accommodate thirty or forty scholars? How high should the room be in order best to promote the comfort and health of the pupils? How warmed—how ventilated? How should the seats be arranged? Stationary or moveable? Long or short? Should the Blackboard be "the plastered wall," or a moveable board? By calling the attention of your readers to this subject, you will confer a great blessing upon the cause of education, and much oblige

I. D.

• Town Supt."

The Plaster Blackboard.

We are requested to republish (from Vol. I. p. 100) directions for making the Plaster Blackboard, and to add directions for the Hard Finish,—which we do:—

"In erecting a building the black surface can be

put on at a very trifling expense. It can be applied to any old surface with equal facility. Any common mason can apply it who knows how to use the "hard finish."

MAKING THE PLASTER BLACKBOARD.

First, wet a sufficient quantity of lamp-black with alcohol, to color the plaster to be used, and mix this coloring with the "hard finish," at the time of putting it on. Make it perfectly black.

The lamp-black may be wet with sour beer instead of alcohol. If it be wet with water it will not mix uniformly with the plaster on account of the oily matter contained in it, and the surface will not dry uniformly black, but will have a spotted appearance."

HARD FINISH.

Take lime and slake it to a paste about as thick as mortar; of this form a dish, and put in water sufficient to wet nearly as much plaster as there is of lime. Calcine, that is boil about an hour, plaster of Paris, and stir into the water nearly the quantity there is of the lime. Thoroughly mix the whole, and use immediately.

Definition of Common, as applied to Schools.

"We utterly repudiate, as unworthy, not of free-men only, but of men, the narrow notion, that there is to be an education for the poor as such. Has God provided for the poor a coarser earth, a paler sky? Does not the glorious sun pour down his golden flood as cheerily upon the poor man's hovel, as upon the rich man's palace? Have not the cottager's children as keen a sense of all the freshness, verdure, fragrance, melody, and beauty of luxuriant nature, as the pale sons of kings? Or is it on the mind that God has stamped the imprint of a baser birth, so that the poor man's child knows with an inborn certainty, that his lot is to crawl, not climb?"

It is not so. God has not done it. Man cannot do it. Mind is immortal. Mind is imperial. It fears no mark of high or low, of rich or poor. It needs no bound of time or place, of rank or circumstance. It asks but freedom. It requires but light. It is heaven-born, and it aspires to heaven. Weakness does not enfeeble it. Poverty cannot repress it. Difficulties do but stimulate its vigor. The poor tallow-chandler's son that sits up all night to read, shall stand and treat with kings, shall add new provinces to the domain of science, shall bind the lightning with a hempen cord, and bring it harmless from the skies. The common school is common, not as an inferior, not as the school for poor men's children, but as the light and air are common."—*Bishop Doane.*

Lesson on Glass.

The pupils should be arranged before a black board, and their answers written down. The utility of having the lesson presented to the eyes of each child, with the power of recalling the attention to what has occurred will soon be seen by the teacher. The piece of glass is seen and examined by each individual, and then the conversation commences after this manner:

Teacher. What is this which I hold in my hand?

Scholars. A piece of glass.

T. Spell glass and write it on the left hand side of the blackboard.

S. Have written G-l-a-s-s—glass.

T. What can you say it is?

S. It is bright.

(Having written the word *qualities* write "bright" under it.)

T. Feel it.

S. It is smooth; it is hard; it is cold.

T. Then write "smooth," "hard," and "cold," under the word "bright," because these are qualities also.

T. Is there any other glass in the room?

S. Yes; the windows.

T. (Close the shutters,) can you see the street now?

S. No. We cannot see through the shutters, the same as we can through the glass.

T. What other quality can you mention as belonging to the glass?

S. We do not know.

T. I will tell you, and I want you to write it down among the qualities, and be sure to remember it. It is transparent. What else is transparent?

S. Water.

T. If I were to throw this glass on the floor, what would happen to it?

S. It would break. It is brittle.

T. "Brittle" is another quality. What substances do you call brittle?

S. Those which break easily.

These are as many qualities as would occur to children at their first attempt. Re-written on a slate, they make a very useful lesson in spelling, in definitions, and afford also a subject for a first essay at composition. It will be observed from this lesson, that the chief business of the teacher is to draw out the minds of the scholars and direct them in proper channels, rather than to pour in upon him as a passive recipient. The student is to be encouraged to keep his mind in exercise.—*Teacher's Advocate.*

INFORMATION. Dr. Franklin remarks that a man as often gets two dollars for the one he spends in informing his mind, as he does for a dollar he lays out in any other way.

Bees are *Geometricians*. Their cells are so constructed as, with the least quantity of material, to have the largest sized spaces and the least possible loss of interstices.

So also with the Ant-Lyon. His funnel shaped trap is as exactly correct in its conformation as if it had been formed by the most skillful artists of our species, with the aid of the best instruments.

The Nautilus is a *Navigator*. He raises and lowers his sails, casts and weighs anchor, and performs other nautical evolutions.

Whole tribes of Birds are *Musicians*.

The Primm is a tailor. He sews the leaves together to make his nest.

The Squirrel is a ferryman, with a chip or a piece of bark for a boat and his tail for a sail, he crosses a stream.

For the School Journal.

Teachers' Institute at Rutland.

MESSRS. EDITORS: As I should like to know the manner in which Teachers' Institutes are conducted in other parts of the State, I send you a brief notice of the one recently held at Rutland, hoping that others will follow my example.

For various reasons we did not try to secure much assistance from abroad, especially as we had no means for compensating any one for any such assistance. The Institute, however, are under great obligations to several gentlemen, for instruction given voluntarily, and more especially to Mr. J. B. Thomson, Mr. C. O. Kimball, Dr. Cook, and Thomas H. Palmer, Esq.

Two objects were kept in view during the whole course of instruction. One, to assist the pupils in understanding the subjects themselves, to instruct them in the several branches taught in common schools; and the other, to give them some hints, as to the best manner of imparting knowledge to others, and for the general management of district schools. And the teachers were repeatedly told that we only laid down general principles, and that every teacher must carry out those principles as her own judgment should dictate in the varied circumstances in which she might be placed.

The examination on the last two Fridays was mostly by written questions requiring written answers. I propose, as soon as convenient, to send you the questions given out on the last day of the Institute, and the various answers given to each.

The people of Rutland manifested a more than commendable interest in behalf of the Institute, and though the County Court was in session during part of the time, still there would have been no difficulty in procuring board for a much larger number than attended, on very reasonable terms.

The Young Ladies who attended the Institute will accept the thanks of the County Superintendent for the very handsome present of a splendid copy of Longfellow's Poetical Works, which did not arrive in season for him to express his gratitude to them *in propria persona*. If the same love of beauty and neatness which they have displayed in the selection of this book, shall appear in their school-rooms, it will do much towards making even the most forbidding of our school houses pleasant and attractive.

Chittenden, May 12, 1848.

C. TAYLOR.

The Figure Nine.

However many nines may be added together or by whatever number or numbers it may be multiplied, the line of figures forming the sum or product may be added together, and it will consist of one or more nines. For instance, twice 9 are 18; the 1 and 8 are 9. 4 times 9 are 36; 3 and 6 are 9. A learner finds some amusement in increasing the amount, as if he expected some variation might be found, but when he gets to 11 times 9, he finds the product is only 99; two nines. And at the next step higher, viz: 12 times 9, he obtains only 108, or one 9.

Then he may be shown the fact that the nine digits, 1, 2, 3, 4, 5, 6, 7, 8, 9, amount to a large number of

nines; namely, 5 nines or 45; and he may be taught that if, instead of adding a line up, he will multiply the middle figure by the last figure, namely, 5 times 9, he will find the value of the whole most readily; and this upon a principle of taking averages, which he will have occasion to resort to in higher departments of the science.

He may then be directed to notice the effect of adding together two lines formed of the nine digits, but in reversed order. For instance:

123456789

987654321

1111111110

There is something striking to the eye in such a product, for the wonderful number recurs in nine ones; and it may serve to induce thinking. Or let the one line be subtracted from the other in this way:

987654321

123456789

8641975320

In this result the odd and even numbers become curiously arranged; the whole of the nine digits are there, as in the upper lines; there is no surplus or repetition; there is only one figure of a kind; of course they amount to five nines.

Would the pupil wish to see a sum in multiplication, the product of which shall contain several figures alike? Tell him to set down all the digits except the 8, and if he would like the product to be all ones, let the line be multiplied by only one nine.

12345679

9

111111111

And here again is the faithful number, for the product presents nine ones.

If the product of twos would please him, let him multiply the line with two nines or 18, and so on with 27, 36, &c., until by multiplying by 9 nines or 81, he will have a product of all nines, and nine of them.

12345679

12345679

12345679

18

45

81

91765432

61798395

12345679

12345679

49389716

98765432

22222222

55555555

99999999

The pupil may try the intermediate numbers to produce threes, fours, sixes, sevens, and eights. There will be found nine of each, and the figures of each product added together will be of equal value to each respective multiplier.

If the number 9 be multiplied eight places in a line by two and the other digits, up to nine inclusive, the whole line of results will be ranged alike, from left to right, and from right to left; that is from *a* to *a*, reading the figures in either direction.

9 9 9 9 9 9 9 9

2 3 4 5 6 7 8 9

— — — — —

418 27 36 45 54 63 72 81a

And the first figure in each couple, from either end, is in simple rotation from one to eight.—*Ross's Mental Calculator*.

THE AGRICULTURIST.

Windsor County Natural History Association.

Reported for the School Journal and Vt. Agriculturist.

An adjourned meeting took place at Quechee village, in Hartford, on Wednesday the 17th of May.

Present—Hon David Pierce, President; Messrs. Cutts, Loverin, Wolcott, Dunham, Edgerton, and Phelps. Several gentlemen, not members, were also present, some of whom took part in the proceedings.

No matters of business coming before the meeting, the President proceeded at once to the call for communications in the different departments of Natural History, as follows:

I. *Mineralogy*. No communications.

II. *Geology*. The Curator explained what observations were wanted; stating that many good observations might be made by those who were not practical geologists. Several classes of facts were wanted, viz., (1.) What variety of rocks occur in each town. Not merely whether granite, gneiss, mica slate, and hornblende or talcose slate existed in the town, but how many varieties of every kind of rock occur. Specimens of each variety should be selected, and brought before the Association. It would, he said, be very easy for any member to do this, if he would but keep his eyes open as he passed along the roads. It was not necessary that the collector should know the exact mineralogical character of the rock, for the present purpose. If he could give information of that kind, so much the better, but at any rate let him bring the specimens. (2.) Another class of facts related to the course of the strata, and also their dip or angle of inclination to a horizontal line. (3.) All facts relative to the arrangement of clay beds and sands, especially in those valleys which are bordered by natural terraces. The President made some farther remarks upon geology, of an interesting character.

III. *Botany*. Some of the green substance found floating in ponds, usually called frog's spawn or spittle, was exhibited; and under the microscope this substance was seen to be a beautiful form of vegetation. Several species were shown; one, the *conferva spiralis*, attracted much admiration.

IV. *Ornithology*. Mr. Tinkham presented a bird, very neatly stuffed and mounted; it was the white-winged cross-bill—*Loxia leucoptera* of Gmelin. Also the skin of another bird, the species undetermined. This last was referred to Messrs. Tinkham, Wolcott, and Cutts, to report upon.

V. *Entomology*. Mr. Tinkham presented a box of insects, collected within the county, which was referred to Messrs. Tinkham, Forbes, of Chester, and Phelps, as a Committee to report upon. The Curator exhibited two specimens of insect-transformation; one, showing the passage of the common house fly from the chrysalis state to the perfect insect. These chrysalids are found just below the surface of the earth, and also in cracks of old houses, in the Autumn, Winter, and Spring. They are of an oval form, and about $\frac{1}{4}$ inch in length.—Presented to the Association by a lad who has experimented much on

the change that insects undergo. The second specimen was from Mr. Edward Everett, of Windsor. It presented to the eye a group of a dozen mud cocoons, from which as many insects of the beetle tribe had apparently emerged. These were contained in a box, in which he had left last fall about the same number of angle-worms. The box had been closed, and so placed and preserved undisturbed that the conclusion seemed unavoidable that the worms had changed to beetles. Referred to a committee:—Messrs. Phelps, Loverin, and Wolcott.

VI. *Conchology*. Mr. Senter made some remarks upon the shells found in the marsh near the residence of Hon. C. Marsh, in Woodstock. There seemed, from observations he had made, to be a great similarity between the fossil shells and those still inhabited by living molluscs and found in the neighboring ponds.

VII. *Herpetology*. } The Curator remarked that
VIII. *Ichthyology*. } the reptiles and fishes of our
County needed much study—many new species, it was supposed, were yet to be found, and members would do well to look for and preserve every thing of the kind.

IX. *Mammology*. Mr. Tinkham presented a curious animal of the mole tribe: he had seen the same animal in Illinois, where it was called the Gopher. This was found in Pomfret. Referred to Messrs. Tinkham, Phelps and Cutts.

X. *Anatomy and Physiology*. No communication.

XI. *Geography*. The Committee on the County Map reported progress. Two towns (Woodstock and Windsor) were nearly completed. The scale decided upon is a mile to the inch. This map is to be the basis of a Geological and Agricultural map of the County. Mr. Wolcott was added to the committee.

XII. *Meteorology*. No communication.

XIII. *Chemistry*. No communication.

The Meeting adjourned to Springfield, on the second Wednesday (14th day) of June.

Although there had been a mistake as to the notice for the meeting, still there was a very good attendance, and all seemed much interested.

But little if any doubt can be entertained that the Association will ultimately be of great service in developing the natural resources of the county.

REMARK. We regard the above communication as appropriate to both departments of our Journal, and would invite attention to it as indicating a means of usefulness and of improvement available in all parts of the State. The labors of County Associations like this may be of great advantage to agriculture, and, by a little attention, be also turned to good account as a means of education, in connection with common schools and academies.—Eds.

Forest Trees in Vermont.

The Hon. Geo. P. Marsh, in his Address before the Rutland County Agricultural Society, protested with excellent reason against the destruction of forest trees in Vermont, and especially on high lands—rocky hills and mountains. We copy the passage, and hope

it will be seriously considered. Many a farm has lost much of its value by the reckless laying bare of its hills, so that its springs and brooks are dried up, and everything is exposed to the parching sun on the one hand and the bleak winds on the other.

EXTRACT.

The functions of the forest, besides supplying timber and fuel, are very various. The conducting powers of trees render them highly useful in restoring the disturbed equilibrium of the electric fluid, they are of great value in sheltering and protecting more tender vegetables against the destructive effects of bleak or parching winds, and the annual deposit of the foliage of deciduous trees, and the decomposition of their decaying trunks, form an accumulation of vegetable mould, which gives the greatest fertility to the often originally barren soils on which they grow, and enriches lower grounds by the wash from rains and the melting snows. The inconveniences resulting from a want of foresight in the economy of the forest are already severely felt in many parts of New England, and even in some of the older towns in Vermont.—Steep hill-sides and rocky ledges are well suited to the permanent growth of wood, but when in the rage for improvement they are improvidently stripped of this protection, the action of sun and wind and rain soon deprives them of their thin coating of vegetable mould, and this, when exhausted, cannot be restored by ordinary husbandry. They remain therefore barren and unseignly blots, producing neither grain nor grass, and yielding no crop but a harvest of noxious weeds, to infest with their scattered seeds the richer arable grounds below. But this is by no means the only evil resulting from the injudicious destruction of the woods. Forests serve as reservoirs and equalizers of humidity. In wet seasons, the decayed leaves and spongy soil of woodlands retain a large proportion of the falling rains, and give back the moisture in time of drouth, by evaporation or through the medium of springs. They thus both check the sudden flow of water from the surface into streams and low grounds, and prevent the droughts of summer from parching our pastures and drying up the rivulets which water them. On the other hand, where too large a proportion of the surface is bared of wood, the action of the summer sun and wind scorches the hills which are no longer shaded or sheltered by trees, the springs and rivulets that found their supply in the bibulous soil of the forest disappear, and the farmer is obliged to surrender his meadows to his cattle, which can no longer find food in his pastures, and sometimes even to drive them miles for water.

Again, the vernal and autumnal rains, and the melting snows of winter, no longer intercepted and absorbed by the leaves or the open soil of the woods, but falling everywhere upon a comparatively hard and even surface, flow swiftly over the smooth ground, washing away the vegetable mould as they seek their natural outlets, fill every ravine with a torrent, and convert every river into an ocean. The suddenness and violence of our freshets increases in proportion as the soil is cleared; bridges are washed away, meadows are swept of their crops and fences, and covered

with barren sand, or themselves abraded by the fury of the current, and there is reason to fear that the valleys of many of our streams will soon be converted from smiling meadows into broad wastes of shingle and gravel and pebbles, deserts in summer, and seas in autumn and spring. The changes which these causes have wrought in the physical geography of Vermont within a single generation, are too striking to have escaped the attention of any observing person, and every middle aged man, who revisits his birth-place after a few years of absence, looks upon another landscape than that which formed the theatre of his youthful toils and pleasures. The signs of artificial improvement are mingled with the tokens of improvident waste, and the bald and barren hills, the dry beds of the smaller streams, the ravines furrowed out by the torrents of spring, and the diminished thread of interval that skirts the widened channel of the rivers, seem ad substitutes for the pleasant groves and brooks and broad meadows of his ancient paternal domain. If the present value of timber and land will not justify the artificial re-planting of grounds injudiciously cleared, at least nature ought to be allowed to re-clothe them with a spontaneous growth of wood, and in our future husbandry a more careful selection should be made of land for permanent improvement. It has long been a practice in many parts of Europe, as well as in our older settlements, to cut the forests reserved for timber and fuel at stated intervals. It is quite time that this practice should be introduced among us. After the first felling of the original forest it is indeed a long time before its place is supplied, because the roots of old and full grown trees seldom throw up shoots, but when the second growth is once established, it may be cut with great advantage, at periods of about twenty-five years, and yield a material, in every respect but size, far superior to the wood of the primitive tree. In many European countries, the economy of the forest is regulated by law; but here, where public opinion determines, or rather in practice constitutes law, we can only appeal to an enlightened self-interest to introduce the reforms, check the abuses, and preserve us from an increase of the evils I have mentioned.

Early Weeding—Stirring the Soil.

A great deal is gained by early weeding. When weeds first start they may be easily destroyed, and if the land has been recently ploughed and planted, it will be light and mellow, and the hoeing of it at an early period requires but little time, compared to what is necessary when the weeds have become large and almost formed a sward, and the earth has become compact and hard.—Another disadvantage in delaying weeding till late, is the hiding of the plants by the luxuriant weeds. In some cases the plants cannot be found without diligent search, and then, perhaps, the weeds cannot be removed without radically disturbing the plants, which from their fragile forms, growing in the shade of tall weeds can hardly stand alone.

Besides the great saving of labor in weeding early, there is a great advantage to the crops, for most all plants that stand in a good soil, free from weeds, will

grow twice as fast for stirring the soil around them. When there are no weeds, plants will come up, grow a little, and then remain almost stationary for weeks, when a little stirring of the soil around them would give them a start and cause a luxuriant growth. This is often shown by part of a row or piece of land being hoed while another part is left. So great a difference is sometimes produced by merely stirring the soil, that the casual observer has supposed that there was a difference in the manure, time of planting, or something else which he would regard as more important than the mere stirring of the soil, as he would regard it.

We have an account of a trial between two cultivators who competed for the greater success under the same circumstances as to soil, manure, seed, &c. One thought to excel by hoeing his lot twice a week, aware of the great advantage of frequently stirring the soil; but he was much surprised to find that he had been beaten, and was anxious to learn the management of his competitor, which was his own plan carried to a greater extent, for he had hoed his lot every morning.

Farmers will find it profitable to prepare their lands, and arrange their plants so that most of the labor in destroying weeds, and stirring the soil, so essential to successful cultivation, may be done by animal labor. In this there will not only be a saving of expense, but a greater profit by a large crop, for by the use of a cultivator or plough between rows, the soil will be stirred deeper than by the hoe, and it may be done more frequently also. A good steady horse, in a well arranged field, in the hoeing season, will do as much as several men.—*Boston Cultivator*.

Profits of Farming.

Timothy Fisher, of Burke, whose cheese has long been known in Boston as the very best, gives, in the *Caledonian*, the following account of the profits of his Dairy:

"I milked 17 cows last summer, 14 new milch cows, one 3 years old farrow heifer, and 2 two year olds; one coming into the dairy the 10th of July, the other the 11th of August. I do not think them any better than 15 new milch cows to come in in May. I made 3708 pounds of new milk cheese.

Sold in Lowell and Charlestown, 3408 lbs. at 10½ cts per pound,	\$ 357 68
Sold 206 lbs of butter, 20 cents,	21 20
Sold 2 calves, for	7 50
Killed 4 veals, worth \$3 each,	12 00
Kept over 7 calves, worth \$4 each.	28 00
Kept 300 lbs. of cheese for our own use, 9 cts,	27 00
Estimated that we used 250 lbs. butter in the family, at 19 cts,	48 50
	<hr/> \$501 91

Deduct for freight of 3614 lbs. to Lowell, \$30; and 7 calves wintered, \$28; and butter and cheese for our own use, \$75 50,

133 50

Net sales from dairy \$368 41—average to each

calves, the average would have been to each cow \$33 39. We used all the butter and cheese, milk and cream, we wanted, from said cows, through the season.

Gave the cows no extra keeping summer or winter.

I have had two hundred dollars in premiums awarded on my cheese in Boston, within ten years, and had it sold at auction in Quincy Hall, at from 15 to 20 cents per pound, besides a number of premiums in this county."

For his Boston premiums Mr. Fisher had the best dairies in New England to compete with. And now the best American cheese is superseding in the English market that of Holland. If cheese-making, therefore, is a good business, there is no reason why Vermont may not command the best prices the world affords.

Mr. Fisher adds another particular in regard to his farming that strikes us as a little remarkable, as follows:—

"I reaped 3 acres of herds-grass, had 198 bushels seed, which sold in Boston at from \$2 75 to \$3 75—	
amounting to	\$695 00
Deduct for freight and commission,	57 50
	<hr/> \$647 50 "

TO KEEP STRIPED BUGS FROM VINES. Sift Plaster of Paris on the plants when the dew is on, rubbing it on the under side of the leaves and the bugs will not touch them. If the rains wash off the plaster, apply it again. A neighbor of ours has tried it with good success for ten years.

BONE MANURE. We have found ground bones one of the most valuable of all manures.—The *sect bone* as it is called is exceedingly active, as well as powerful, and has proved more useful with us than the best guano. This kind is made by sawing bone in water, for manufacturing purposes, and costs, in Boston, about half a dollar a bushel. It is particularly useful on peas, used in small quantities, tending to make them productive and to fill out the pod. We presume the effect would be similar on the various kinds of English grain. Where it is desired that the effect should be lasting, the coarse ground is more profitable, as it decays and mingles with the soil more slowly. It may be obtained in Boston at 20 to 25 cents per bushel. The effects of bone manure, on fruit trees, are very striking. It not only makes them productive, but assists in perfecting the fruit of those kinds which are apt to fail. For Indian corn it is decidedly valuable. But, probably, there is no other crop, on which its influence is so great as on roots, and this is particularly true in relation to the English Turnip. In an experiment on turnips, made with four different kinds of manure, the bone dust produced the greatest crop. Next to it, came hog manure, when very liberally applied. But there was this advantage in favor of the bone—that the whole expense of it did not exceed that of carting alone, of the hog manure. Why will not some of our readers make a series of careful experiments the present season, with this and other manures, and give the results. If carefully conducted they would be very useful. N. E. Fernald

Rearing Lambs for Market.

At our request, Mr. George Edwards, of Mechanicsville, Saratoga Co., has furnished us the following account of managing sheep and rearing lambs for market:—

"As my farm is near one of our large markets, and is well adapted to what I call *mixed husbandry*—that is, sheep, grain and grass—the soil a loam, high and dry—I find the rearing of fat lambs the most profitable branch of farming. The ewes have generally been bought in September, always selecting those of rather coarse wool, they being larger and generally the best nurses. The rams, (pure South Down) are put to them early in November, and the lambs are dropped about the first of April. The ewes are fed during the winter with corn stalks and straw, and about one month before lambing, and from thence till they go to pasture, they are each fed with three quarts of brewer's grain per day.

Last year 100 ewes raised 100 lambs. The wool which was sold at Troy, at 32 cents per lb., brought \$104 75. Twenty-five lambs sold at \$2 each, one ram lamb \$5, one do. \$3, and the remaining seventy-three at \$1 75 each. They were all taken away by the last of July. The ewes were sold to the butchers at \$2 each in October, so that the one hundred ewes realized \$490 50.

It is desirable to get rid of the lambs early, that the ewes may have time to fatten, so that they may be sold to the butcher in the fall, giving room for a new flock which should be brought in for the next season.

It is a good mode, and one which we have frequently adopted, if we have a piece of rye, which had been sown on a clover sod, (or where the land was otherwise in good order,) to plough the stubble the very moment the rye is off the field, and sow turnips.—The furrows are first harrowed with a light harrow, lengthwise, and then crosswise—the seed sown broadcast, 2 pounds to the acre—ending with rolling the ground with a very light roller. The turnip called the stubble turnip is preferable.

A larger quantity of seed is sown than some use, in order to get a good stand in spite of the ravages of the fly. I have now procured one of Emery's seed planters and shall probably sow the turnips in drills henceforth—the two rows two feet apart, to give space to work between them with a horse and small plough or cultivator. As soon as the turnips are up about two inches we put on the light harrows, passing both ways, keeping a straight course. If the turnips are in drills, the drags are only run across the rows. About two days after the harrows are run over the turnips, they are gone over with hoes and thinned where they are in bunches.

Ten acres of turnips, with tolerably even plants will supply and fatten 150 sheep, and will afford fine keep for them from the first of October to the end of November, (if there is not much snow) at a time when pasture is generally short. About one acre should be fenced off to commence with, and after four or five days add about one-fourth of an acre every other day. At first, the sheep will not appear to

like the turnips, but after three or four days they will eat them rapidly. A boy should be placed with the sheep for two or three hours each day to chop the shells—the sheep will fall back and eat them up clean.

While the sheep are in the turnips, it is an advantage to give them a little cut hay in troughs—say about three bushels per day for one hundred and fifty sheep.

Let any man try this plan, and if his land is in good heart, he will not only find his sheep get really fat, but they will leave the land in fine condition for a spring crop. It must be observed, the more attention that is paid to keeping down the weeds the better the crop will pay the cost."—*Cultivator*.

Watering the Tops of Newly Transplanted Trees.

BY S. G. PERKINS, ESQ. OF BOSTON, MASS.

If the tree does not put out shoots in the spring, at the usual time, or as soon as others do that are planted at the same time, give it one good watering at the roots, and no more while it remains in a dormant state; but if the bark remains fresh, or does not turn black, wash the head and body with a watering pot or syringe every evening at sundown, until it begins to shoot or grow, when you may cease watering the head, and water the roots if required. I have had trees to remain until the last of July without putting out a leaf or shoot of any kind, and after that become as fine specimens as any in my garden.

Watering the head and body of a tree that is tardy in putting forth its shoots, is the safest, and indeed the only sure mode of bringing them out, while continued watering of the roots is almost sure destruction to them.

Trees planted on a south wall or fence, that do not put out shoots in due season, should be covered for several hours when the sun is out, if the weather be warm. The leaves may be considered a sort of suction pump, which draws up the moisture from its roots and produces its increased growth, whereas a tree without leaves, and that is not already attached to the ground, has no means of carrying off the moisture from the roots. For example, of two branches of equal size and weight, the one with leaves and the other without them, are placed in vessels containing an equal quantity of water, and exposed to the sun, the one having leaves will take up the greater part of the liquid, while the other will consume comparatively little.

Some ten years ago, I imported from Paris 210 pear trees on quince stocks, whose roots, on their arrival, I found to be entirely black and dead. I shaved off with a drawing knife all the roots down to the stump. These I planted in trenches, tying them to cross-bars to keep them firm, and then filled up the trench with good soil. The heads and bodies of these trees were regularly washed in dry weather, until they began to sprout, which most of them did in abundance during the summer, and I finally saved out of the whole number, 174, which become as well rooted, and as good trees as any in my garden.

This has happened more than once. Three or four years ago, I imported among other trees, twenty plum

trees, from six to seven feet high, the heads of which had been budded the previous year in France. These buds had grown from nine to twelve inches long, and were perfectly fresh when they arrived, but the roots on examination were found entirely dead. Two of these I gave away. One was good for nothing, and the other seventeen, I planted in my garden, having cut out all the roots that had fibres, they being entirely dead. One of my men said I might as well plant my walking stick. Sixteen of these are now flourishing trees, well grown and well rooted, new roots being induced by means of washing the upper part of the tree.

Remarks.—The foregoing will please such of our readers as like plain, sensible advice, from a thoroughly practical man. We have ourselves seen with great surprise and satisfaction, the trees referred to as having been so successfully transplanted by Mr. Perkins, under what were the most unfavorable circumstances. The great advantage of the mode he practices, of *watering the bark*, and not watering the roots of a tree, in a half dormant state, our correspondent thoroughly convinced us of in his own garden.—*Downing's Horticulturist.*

From Stephens's Book of the Farm.

CHURNING.

The temperature at which cream is put into the churn has a considerable influence on the time which the butter will take to make, and also on the weight of butter obtained from a given quantity of cream. It has been found that 55° Fahrenheit is the temperature which best attains these ends, and it is one easily attained in a cool apartment early of a summer morning. The churning should be done slowly at first, until the cream has been completely broken—that is, rendered a uniform mass—when it becomes thinner, and the churning is felt to be easier. During the breaking of the cream a good deal of gas is evolved, which is usually let off by a small spigot-hole, if the churn be tight, such as a barrel-churn; but in other churns, which have a cover, the air escapes of itself. When the motion of churning is rotatory, it should be continued in the same direction, and not changed backward and forward. I am not sure that a satisfactory reason can be given for continuing uniform motion, but the opinion is that the butter is formed more simultaneously, and that the backward and forward motions are apt to make the butter soft. It is certain, at all events, when the motion is uniform and rather slow, the butter, whenever it is formed, is felt to stop the agitators at once. After the cream has been broken, the motion may be a little increased, and continued so until a change is heard in the sound within the churn, from a smooth to a harsh tone, and until an unequal resistance is felt to be given to the agitators.

The butter may soon be expected to form after this, and, by increasing the motion a little more, it will form the sooner, and the moment it is formed the motion should cease. The rate of motion in churning butter is of some importance, for, when performed too slowly, a longer time will be spent in churning than is necessary, and the butter will be strong-tasted.

On the other hand, when the motion is too rapid, the butter will be soft and frothy, when the churning is said to have *burst*. In very warm weather, and when the cream is put in too warm, the churning is liable to burst with any degree of fast motion, and hence the judgment is required to be exercised in the circumstances. I suppose that the most proper motion in churning has never been ascertained by experiment, and to determine which would probably be tedious, but it would be worth while being tried. When butter forms from cream in $\frac{1}{2}$ of an hour to 1 hour churning, it is satisfactory work; when it comes much sooner it will be soft, and when much later it will be strong-tasted. The temperature, by agitation during churning, rises three or four degrees.

Butter assumes a texture according as it has been treated. When burst in the churning, it is not only soft but frothy, and on being cut with the knife seems as if it could be compressed into much less bulk.—When churned too rapidly, especially in warm weather, the churning may not advance to the degree of bursting, but the butter will always continue soft and never assume a firmness, though worked up with ever so much care, and in the coolest manner; and, when one piece is separated from another, they are drawn asunder with a jagged surface, and stick to the knife that cuts them. Soft butter will not keep long, whether salted or fresh. When over-churned—that is, when the churning has been continued after the butter had been formed, it becomes soft, not unlike the state when it is too rapidly churned. When properly churned, both in regard to time and temperature, butter becomes firm with very little working, and is tenacious; but its most desirable state is that of waxy, when it is easily moulded into any shape, and may be drawn out a considerable length before breaking. It is only in this state that butter has the rich nutty flavor and smell, which impart so high a degree of pleasure in partaking of it. To judge of butter, it is not necessary to taste it—the smooth, unctuous feel on rubbing a small piece between the finger and thumb, expresses at once its richness of quality; the nutty smell indicates a similar taste; and the bright, glistening, cream-colored surface shows it to be in a clean state.

What I have stated in reference to the making of butter, applies especially to that obtained from cream alone, and from cream in the usual state for butter—namely, after it has become sour by keeping; but butter can be obtained from sweet cream as well, though churning renders its buttermilk sour, as well as that always is from sour cream. To have butter in perfection from sweet cream, it should be churned every day; and, as the supply of cream daily is usually very limited, a smaller churn than usual is most convenient to be used; and for this purpose there is, perhaps, none better than the table-churn, by the peculiar construction of which, being placed in a vessel, the temperature of the cream can be regulated in all seasons. I see it alleged in advertisements of churns of similar construction to this, that butter may be made from cream in 10 or 12 minutes. I have made several experiments with such a table-churn, in churning cream at different temperatures, and with different

velocities, but never obtained good butter in less than 30 minutes; and, when formed so quickly as in 15 minutes, the butter was as soft as froth. I have heard it alleged that butter of the finest quality cannot be obtained from sweet cream; but the allegation, I suspect, is made by persons who have little experience of butter from sweet cream. So far am I from coinciding in this opinion, that I know butter of the richest quality, and of the finest flavor and appearance, can be made from sweet cream. Were this butter not necessarily good, would the nobles of the land have it upon their tables every morning? It is true that sweet cream requires longer churning than sour, still, butter is obtained from it in from 30 to 40 minutes; and, if it is an unprofitable mode of using cream, that is a different question. For my own taste, I would never desire better butter, all the year round, than that churned every morning in a small churn from sweet cream. Such butter, on now baked oat-cake, cooled, with a little virgin flower-honey, and a cup of hot, strong coffee, molified with crystalized sugar and cream, such as the butter had been made from, is a breakfast worth partaking of, but can seldom be obtained.

Profitable Garden.

We see it stated, in some of our exchanges, that the editor of the Maine Farmer, by judicious and skillful management, raises from a single acre of land sufficient produce to support his family, cows, several pigs, and a stock of poultry. Of course this can be done only by a systematic course of treatment. His success, however, is no greater than that of one of our citizens, Mr. Charles A. Potter, who has a small garden attached to his residence which measures only 32 by 28 feet. This small strip of land was set out some ten or twelve years ago with quince bushes, pear and plum trees. The last year, Mr. P. gathered from his trees more than a bushel of plums, a good crop of pears, and sold *forty-five dollars* worth of quinces, and *fifty dollars* worth of young quince trees raised by turning under the limbs of the old bushes. Mr. Potter's treatment of the land is very simple and cheap. The only manure he uses is salt mud, rotten leaves and urine. His success is wonderful, and if others desire the same they must take the same course to ensure it.—*Dancers Courier.*

A Productive Farm.

James Gowen, Esq., well known as a spirited, and successful farmer near Philadelphia, whose farm (Mt. Airy) is now the seat of an Agricultural Institute, under the care of Professor Wilkinson, in a communication to the American Farmers' Cabinet, states that though bred to, and had long been in business in the city, and meeting with many unexpected difficulties, when he commenced farming, and having much to learn, nevertheless, by untiring perseverance in a systematic course of culture, at length brought his farm, of only 150 acres, to produce as follows: "For years past," says he, "I have kept some 40 or 50 head of cattle, during which time I filled barns with hay, and grain cribs with corn, cellar pits with pota-

toes and other roots. In 1846, I mowed of first crop hay, over 130 tons, reaped 500 bushels of grain, 400 bushels of oats, husked 800 bushels of shelled corn, gathered over 1000 bushels of choice sound potatoes, and the usual large crops of other roots. Last year, a bad hay season, I mowed over 100 tons, harvested 800 bushels of grain, husked some 1200 bushels of shelled corn, dug 1500 bushels of sound choice potatoes, 500 bushels of carrots, 400 bushels of parsnips, and 1500 bushels of turnips. Sold, within the last two years, \$1500 worth of cattle and swine, \$1000 worth of butter, lard, &c., and have now on hand more than 30 head of superior cattle, and a large stock of the finest swine. There is now on the ground over 30 acres of winter grain. I have hauled out, and stacked on the field, barnyard manure, made on the place, sufficient to plant 6 acres of potatoes, this spring, leaving more than enough well rotted for the gardens, and the usual crop of carrots, &c., &c. I seldom apply any manure to the corn crop, and it is wholly out of the question to the oats on my land.—Now does not this appear almost incredible on so small a farm! But it is susceptible of belief, when it is known that I soil my cattle during the months of May and June, which permits the cropping and mowing of nearly all the land."

Productiveness of Strawberries.

To one who raises for market it is quite essential to raise such a variety as will yield a surplus of a hundred per cent. above the cost of raising, rather than one that will yield no such surplus at all; and the home cultivator wishes to get as much for his labor and land as practicable. Hovey's Seedling, it is said, has yielded 2000 quarts, or more than 62 bushels per acre. The Old Hudson (of Cincinnati) which is probably the most productive of all strawberries as yet cultivated, has produced, according to Nicholas Longworth, at the rate of 5000 quarts, or 156 bushels per acre.—Burr's Late Prolific, a new variety lately originated at Columbus, Ohio, it is stated, yielded 35 quarts on a bed 6 feet by 20, which is about 240 bushels per acre; it doubtless received the best possible culture. It would be very interesting, and of great value to know the comparative productiveness of the different varieties of strawberry, raised side by side, and treated precisely alike.—*Exchange paper.*

Peaches on Plum Stocks.

We have made some remarks in this number, upon grafting Pear scions on the Apple. There is another branch of fruit culture, which has, as yet, obtained little attention among us, that is, the culture of the peach and apricot on the plum stock.—The peach and apricot do not flourish so well in our climate as in other parts of New England farther south, but the plum is perfectly hardy with us. It is slower in its growth than the peach, and hence might induce, by its supplying a less quantity of sap than the roots of the peach itself, a more slow and hardy growth of the peach grafted into it. In England, according to accounts published in that country, this plan is pursued with success. The trees are somewhat dwarfed in

their growth, and are not quite as long lived, but they produce fruit much earlier and more abundantly while they live.—*Maine Farmer.*

THOROUGH CULTIVATION is the only sure means of success in farming operations. To a want of this, more than to any other cause, is to be attributed the failure of farmers to realize the hopes with which they commence their operations. A good deal of land poorly cultivated will keep any man poor, while a much more limited quantity, made highly productive, it properly managed, is sure to be profitable. There are cases to be found, when single acres are made to give a greater income than whole farms in their vicinity. But, it is objected by some, that they must do as they do, because they have not the means for high culture. Let such try an experiment, beginning with a small piece of ground, such as they have the means of bringing up, and put it into a state of high productiveness.—Let them aim, each successive year to add something to the extent of ground which they have in this productive state. Patience and perseverance will effect wonders. In a few years they will realize the benefits of this system, and each successive year the profits of it will enable them to extend it more and more. Try it and see.—*N. E. Farmer.*

SOAP AS A MANURE.—T. Dalton, a silk dyer, says, in the London Agricultural Gazette, that he uses 15 cwt. of soap weekly to discharge the oily matter from the milk, and forming of itself a kind of soap, the whole of which yields from four to six thousand gallons of strong soap-suds per week. This he has lately applied to his farm, and "its effects are most extraordinary." It has been used only one season, and its results cannot be accurately given; but he considers it more powerful than any other manure.—*Southern Planter.*

Many barrels of strong soap-suds are annually thrown into the gutter and run to waste from every farmer's laundry. Could not these be poured on the manure heap, or otherwise saved to increase his "bank," and thus help to obviate the necessity of purchasing foreign manures?—*Farmers' Cabinet.*

IRON FENCES. Iron wire is now used in the construction of fences, and the Westminister (Md.) Carroltonian gives the following description of the manner in which it is adapted to this purpose:—

"The posts are about one half the ordinary size, planted firmly at the distance of ten feet apart, with nine strands of wire drawn tightly through a half-inch auger hole, and tightly plugged at each hole; the wire is of the size of that used for the handle of the Yankee bucket, and to combine them more firm, wire of a lighter description is wound through the middle, which prevents the hogs from separating them and creeping through. The whole expense of this fence does not exceed twenty-five cents per pannel of ten feet; and for neatness and durability, cannot be surpassed by anything in timber."

The Senate of Connecticut has appropriated \$10,000 for the establishment of two Agricultural Schools.

The Markets.

BRIGHTON MARKET, Thursday, May 25.

At Market, 190 Beef Cattle, 18 pair Working Oxen, 23 Cows and Calves, 600 Sheep, and 2030 Swine.

Prices. *Beef Cattle*—In consequence of the large number at market Monday, have not much advanced. We quote extra, \$7; first quality, \$6 50 a 6 75; second, \$6 a 6 25.

Working Oxen—Sales at \$72, 80, 92 and \$110.

Cows and Calves—Sales at \$23, 25, 28, 31, 35, and \$37.

Sheep—\$22 25, 2 75, 3 50 and \$4 25.

Swine—Lots to peddle 4 a 4½ for Sows, and 5 a 5½ for Barrows. At retail from 5 to 7c.—*Daily Advertiser.*

NEW-YORK CATTLE MARKET, May 21.

At Market, 1400 Beef Cattle, (all from the South;) 600 Hogs, and 1000 Sheep and Lambs.

Prices.—*Beef Cattle* have been retailing during the week at \$6 a 7 25 per 100 lbs. An active demand prevailed, and only about 100 head remain unsold.

Sheep and Lambs—More plenty and cheaper. Sales of Sheep at \$1 75 a 3 to 4 50, as in quality. Lambs, \$1 50 a 2 75 to \$3 25. 300 unsold.—*Jour. of Comm.*

PANICUL HALL MARKET.

WHOLESALE.			
Beef, fresh, lb.	8 a 14	Apples, barrel,	2 50 a 3 00
Mutton, 1st qual.	7 a 10	do, dried, lb.	5 a 6
2d "	4 a 6	Bears, bush,	1 50 a 1 75
Lambs, each,	3 00 a 4 00	Pean, bushel,	2 50 a 3 00
Veal, lb.	8 a 10	Potatoes, barrel,	
Pigs, roasting,	1 00 a 1 25	Eastport,	3 50 a 3 75
Chickens, pair,	75 a 1 25	Common,	2 50 a 2 75
Turkeys,	75 a 1 25	SEED—RETAIL	
Geese, mongrel,	1 25 a 1 50	Clover, North, lb.	10 a 12
Pigeons, dozen,	1 25 a 1 50	Southern,	8 a 9
Pork, per 100 lbs.	6 00 a 7 00	White Dutch,	25
Lard, best, per bbl.	6 50 a 7 50	Lucerne, or French,	33
Western, keg,	7 50 a 8 00	Herdgrass, bush,	3 75 a 4 00
Butter, lump, lb.	25 a 28	Red Top, bushel,	
do, firkin,	20 a 25	Northern,	1 25 a 1 50
Cheese, new milk,	8 a 10	Southern,	65 a 88
do, four meal,	5 a 6	Orchard Grass,	2 a 2 50
Eggs, doz.	— a 14	Fowl Meadow,	2 50 a

WOOL—Boston, May 24.

Sales of fleece and pulled have been made the past week to some extent, at about the same rates as have previously been obtained. Some lots fleece have been sold at lower prices. A lot of 130,000 lbs. New-York and Ohio fleeces was sold at auction in New York, on Friday last, at prices ranging from 29½ a 36½ per lb. cash.

Prime Saxony Fleeces, wash'd lb.	38 a 42
American full blood	do 35 a 37
do 3-4	do 31 a 33
do 1-2	do 29 a 31
do 1-4 and com.	do 23 a 28
Smyrna, washed,	16 a 20
do unwashed,	8 a 14
Bengasi, unwashed,	7 a 9
Buenos Ayres, unpicked,	6 a 14
Extra Northern pulled lamb,	33 a 35
Super, do do do	30 a 32
No. 1 do do do	26 a 28
2 do do do	20 a 22
3 do do do	14 a 15

—*Courier.*

Boston, May 27. The quotations of the *Daily Advertiser* are higher than those of *Courier*, as follows:—

Saxony fleeces,	42 a 45
Full blood,	37 a 37½
1 a 1 blood,	33 a 38
Common 1-4 blood,	28 a 30
Lambs, Superfine,	30 a 33
do No. 1	27 a 29
do No. 2	20 a 23
do No. 3	9 a 12

FOREIGN.

Smyrna washed,	18 a 21
do, unwashed,	10 a 14
Bengasi,	8 a 9
Buenos Ayres,	6 a 15
Crimea,	8 a 10
Mexican,	12 a 13

LONDON, MAY 12. Supplies abundant and prices on the decline, as demand is limited.

Domestic Economy.

TO RENEW OLD BREAD OR CAKE.

Fill a bread steamer about half full of water, and lay the dry bread on it, and set it on the fire, where it will steam the bread from half to three-quarters of an hour; then wrap the bread in a towel, and let it remain till dry. In this way, bread that is old and dry may be made moist and good. Where a steamer cannot be procured, soak the bread in cold water till it has absorbed sufficient water to be moist inside—then put it in a bake pan, without any cover, and heat it very hot. If broken pieces of bread are put in the oven, five or six hours after baking, and rusked, they will keep good a long time. Sour, heavy bread, treated in this manner, will make very decent cakes and puddings, provided there is enough saleratus used in making them to correct the acidity of the bread. Rich cake, that has wine or brandy in it, will remain good in cold weather several months, if it is kept in a cool, dry place. The day in which it is to be eaten, put it in a cake pan, and set it in a bake pan that has half a pint of water in it—set on the bake pan cover, and let the cake bake till it is heated very hot. Let it get cold before cutting it.—*American Housewife.*

CEMENT FOR BROKEN CHINA, GLASS, AND EARTHEN-WARE.

Rub the edge of the china or glass with the beaten white of an egg. Tie very finely powdered quick lime in a muslin bag, and sift it thick over the edges of the dishes that have been previously rubbed with the egg. Match and bind the pieces together, and let it remain bound several weeks. This is good cement for every kind of crockery but thick, heavy glass and coarse earthen-ware; the former cannot be cemented with any thing; for the latter, white paint will answer.—Paint and match the broken edges together, and let them remain until the paint becomes dry and hard.—Milk is a good cement for crockery—the pieces should be matched, and bound together tight, then put in cold milk, and the milk set where it will boil for half an hour; then take it from the fire, and let the crockery remain till the milk is cold. Let the crockery remain bound for several weeks. The Chinese method of mending broken china, is to grind flint glass, on a painter's stone, till it is reduced to an impalpable powder; then beat it with the white of an egg, to a froth, and lay it on the broken pieces, match and bind them together firmly, and let them remain several weeks. It is said that no art will then be able to break it in the same place.—*Id.*

TO LOOSEN THE STOPPLES

Of Decanters and Smelling Bottles, that are wedged in tight.

Dip the end of a feather in oil, and rub it round the stopple, close to the mouth of the bottle; then put the bottle about a couple of feet from the fire, having the mouth towards it. The heat will cause the oil to run down between the stopple and mouth of the bottle. When warm, strike the bottle gently on both sides, with any light wooden instrument that you may happen to have. If the stopple cannot be taken out

with the hand at the end of this process, repeat it, and you will finally succeed by persevering in it, however firmly it may be wedged in.—*Id.*

TO COOK PARSNIPS. Persons who have never eaten parsnips cooked according to the following mode, have no idea what an excellent dish they are. Scrape the parsnip, wash and slice them lengthwise; boil in just enough water to cover them till thoroughly done. Then put in a piece of butter, with a little salt and pepper. Beat up an egg with a spoonful of flour, and pour over them. They are then ready to dish up. Parsnips are likewise very good, split once and roasted with pork in the dripping pan.—*S. Planter.*

PRESERVING BUTTER. The farmers in the parish of Udney, in the county of Aberdeen, Scotland, practice the following method of curing their butter, which gives it a great superiority over that of their neighbors:

Take two parts of the best common salt, one part of sugar, and one part of saltpetre: take one ounce of this composition for sixteen ounces of butter; work it well into the mass and close it up for use. The butter with this mixture appears of a rich marrowy consistence, and fine color, and never acquires a brittle hardness, nor tastes salty. Dr. Anderson says, "I have ate butter cured with the above composition, that has been kept three years, and it was as sweet as at first." But it must be noted that butter thus cured, requires to stand three weeks or a month before it is begun to be used; if it be sooner opened, the salts are not sufficiently blended with it; and sometimes the coolness of the nitre will then be perceived, which totally disappears afterwards.

TO MAKE STRONG TEA. A constant reader says:—"Perhaps it is not generally known, that the way to make good tea is, first to pour the boiling water into the pot, and then put in the tea, not mixing it at all. The reason is obvious; for, of course, the hottest water is on top, where the steam rises, when the tea is better infused, and the flavor drawn out more properly."—*Bellows Falls Gazette.*

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,
and sent to subscribers on the following

TERMS:

For a single copy,	- - - - -	50 cents.
5 copies, sent to one address,	- - - - -	2 00
10 " " " " "	- - - - -	3 00
16 " " " " "	- - - - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. II.

WINDSOR, VT., JULY, 1848.

No. 3.

THE SCHOOL JOURNAL.

For the School Journal.

Moral Education.

NO. VI.

Our last number was chiefly occupied with the *Development of the Conscience in the Common School*, and the means provided to aid the teacher in that important work were distinctly shown. These consisted principally of a series of reading-books for early youth, calculated to awaken and arouse the conscience, and to strengthen it by constant practice, while at the same time it furnished regularly-progressive reading exercises, both interesting and instructive to young minds.* A great variety of topics for the exercise of the conscience are necessarily introduced into these books. But the following are the points on which the greatest stress is laid:

1. An abiding sense of the *omnipresence* of the Deity.

2. *Veneration*: or cheerful, prompt, and entire obedience to parents and teachers, extended, on the same principle, to the Heavenly Father. Reverence for age and station.

3. *Love*: exemplified by affection and generosity to brothers and sisters, gradually extending, in wider circles, to school-mates and companions, to the human race, to all created beings, as the progeny of the Universal Parent.

4. *Truth*: exact truth, without disguise, exaggeration, or diminution. This moral element is considered throughout the work, not so much *one* of the virtues, as the great treasure-house, which contains them all.

5. *Forgiveness* of injuries.

6. *Purity* of thought and feeling shown to be as indispensable as correctness of action.

This sort of discipline of the conscience has been sadly overlooked, both in schools and in families. It has been well observed, that "there is but one high school, that in which the heart is educated." In those that have usurped the name, every thing else, one would imagine, has been attended to. There is

* The work is in four parts, which may be used either singly or in connexion. Its title is, "The Moral Instructor; or Culture of the Heart, Affections, and Intellect, while learning to read. It is not to the risen, but to the rising generation, that we look for great and beneficial changes. The maturity of manhood is too inflexible to admit of being re-cast into a new and nobler mould." The publishers are William D. Ticknor & Co., Boston.

something, it is true, called moral training, in many of our academical institutions. The child is called on to listen to line upon line, precept upon precept; but, as might naturally be expected, with but trifling effect. For that *especial* moral power, with which God has vested every child, lies, in most cases, powerless for want of use.

But mere development, though absolutely essential, is not sufficient. Nothing is more worthless than a morality which rests wholly in words and thoughts. It must be carried into action. The children must be stirred up to *deeds* of kindness, of practical benevolence. A good teacher will find hourly opportunities of reducing to actual practice the lessons on which the conscience has been exercised from the reading-books. He will point out to his little pupils occasions for the reciprocal display of generosity, magnanimity, and good temper; of sympathy, gratitude, or forgiveness. He will aid them in the formation of habits of patience and perseverance; of docility and order; of moral courage, self-restraint, and firmness; of punctuality and obedience; of fidelity and sincerity. And, whenever an individual occasion occurs for the *practice* of any of these virtues, the teacher will produce a powerful effect on all his pupils, by selecting the appropriate lesson from the "Instructor," to be read for the benefit of the whole school, all of course being called to give attention, and to join the moral catechetical exercise which follows.

Theory and practice will thus be united. The pupils, in one and the same exercise, will make improvement in reading; add to their sum of knowledge; acquire a love for nature, a taste for beauty; exercise thought and develop their reasoning powers; and finally, which is the most important of all, strengthen conscience, and form a *habit* of listening to and carrying out its decisions.

"*Vocal Music*. The introduction of vocal music into the public schools is a matter of vast importance. Regarded merely as a refined pleasure, it has a favorable bearing on public morals. Let taste and skill in this beautiful art be spread among us, and every family will have a new resource, home a new attraction. Social intercourse will be more cheerful, and an innocent public amusement be furnished to the community. Public amusements, by bringing multitudes together to kindle with one emotion, have a humanizing influence; and, among these bonds of society, none produces so much unmixed good as music. What a fulness of enjoyment has our Creator placed within our reach, by surrounding us with an atmosphere

which may be shaped into sweet sounds! And yet this goodness is almost lost upon us, through want of culture of the organs by which this provision is to be enjoyed.

"In addition to this consideration it ought to be remembered, that vocal music forms a very interesting part of divine worship; and that, in most Protestant churches it is the only part of the service in which the congregation can orally join. How desirable then, that no one be excluded from a share in this divine homage!

"As a school exercise, music produces admirable effects. It soothes the passions into peace, it allays both mental and bodily fatigue. And, if a moderate share of time be devoted to it, it will thus be found to hasten rather than retard other studies; to cause a gain of time rather than a loss. Music ranks high, also, as a mental discipline."*

The absurd prejudice, that a musical voice and ear is limited by Providence to a favored few, is fast dying away. On the continent of Europe music is taught as universally as reading; and wherever it has been properly introduced into the schools in this country, it has been found that the want of a musical ear is the exception, and the possession of it the rule. The cultivation of the voice is generally delayed here till it is *too late*. Like every other part of the body, to attain strength and proficiency it must be exercised in early youth, while the organ is delicate and pliable. What use should we have of our limbs or power of speech, were both unpractised till the age of 16 or 18? Yet is not this generally adopted in respect to music!

Proper songs for youth used to be rare and far between. But this is no longer an obstacle. An abundant variety of poetry has appeared within a few years, suited to every age, well calculated to strengthen family ties, awaken universal sympathy, cultivate a taste for the beauties of nature, and inspire a lively and abiding spirit of devotion.

Music tends to improve the heart, then. Who has not felt its soothing and calming effects? "Married to immortal verse," sung with words calculated to awaken our better feelings, it produces the most salutary results. The marvellous effects occasioned by the *Marseillaise Hymn* and the *Rans des Vaches* show what a powerful instrument it is capable of becoming. And shall such an instrument be abandoned to vicious purposes; to bacchanalian orgies, or incitements to war and licentiousness? Let proper lyric poetry be selected, and music will be the happy means of repressing sensuality and of awakening the virtuous emotions and affections in our youth, and of strengthening and confirming them in those of mature age.

Lastly, vocal music forms a powerful aid to devotion. Were it to be universally cultivated through the public school, what an impetus it would give everywhere to family worship! how vividly would it cause the holy flame to burn on the domestic altar! how many would it rouse to real devotion, who are now cold, weary listeners, almost overcome with ennui!

DYMOND.

* Teacher's Manual.

Plans for School Houses.

We had made some preparation to redeem the promise made in our last respecting school houses, when we were informed that the subject had been referred, in this County, to a Committee able and disposed to do it justice. See notice of the proceedings of the Educational Conventions. Having reason to expect a report from that Committee in season for our next number, and presuming that all the particulars mentioned by our correspondent will receive attention in it, we let the subject rest for the present, and defer the publication of a sketch received from another source.

Educational Conventions.

Since the publication of our last number we have had, in this part of the State, several Educational Conventions, which were rendered particularly attractive and useful by the attendance of the State Superintendent. The first was held at Waitsfield, May 31. We have received no official account of the doings of this meeting, but learn that the attendance was large and the meeting animated. Addresses were delivered by Governor Eaton and other gentlemen. That of his Excellency was chiefly to Teachers.

On June 2d, the Orange county Common School Association held its annual meeting at Williamstown. The following are the officers chosen for the ensuing year:

Hon. J. K. Parish President.	
Gen. E. Ross, Vice President.	
Rev. T. S. Hubbard, Rec. Secretary.	
Dr. I. Morse, Cor. Secretary.	
Rev. E. C. Taylor,	} Directors.
J. M. Flint.	
R. S. Howard,	

The official account of the meeting says:—

The Convention was addressed by Mr. Hubbard, On "Teachers' Hindrances"—followed by discussion by Mr. Flint and Mr. Howard.

Mr. Bishop made statements respecting "*The School Journal and Vermont Agriculturist*," its origin, design, and importance.

The following resolutions were presented and adopted:

1. *Resolved*, That the subject of Common Schools is one of paramount importance.

2. *Resolved*, That one of the best means of awakening an interest in Common Schools and promoting their improvement is the circulation of the *School Journal*, and consequently it is the duty of every Superintendent, Prudential Committee, and Teacher to aid in extending its circulation.

3. *Resolved*, That the Teacher who exerts himself to the utmost to qualify himself for teaching, is a public benefactor.

4. *Resolved*, That Teachers must rely principally upon their own faithfulness and superior qualifications to raise their wages.

5. *Resolved*, That we recommend every school district to furnish its house with large blackboards, globe, and Mitchell's outline maps.

The Convention then listened to a very able address from His Excellency, Gov. Eaton, on the Physical, Moral and Intellectual Education of the rising generation.

The audience was large, and the assembly dispersed with a happy impression in favor of the efforts making to improve our common schools.

On Tuesday, June 6, a Convention was held at West Bethel. The subjects brought before the meeting were: the Improvement of School Houses; the present system of Supervision of Schools; the expediency of employing Teachers who refuse or neglect to be examined by the proper authorities; the duty of Parents to coöperate with Teachers and others in improving our Schools. The Convention also recommended increased attention to moral and religious instruction in school, the use of Mitchell's Outline Maps, Cornell's Globe, 'Teachers' Institutes and Teachers' Associations for each Probate District in the County. A Committee was appointed under a resolution to prepare and present to the County, through the School Journal, a Plan of a School House. The Committee are, Norman Williams, Esq., N. Bishop, and Hampden Catts, Esq. At the meeting at Quechee, Rev. D. Forbes was added to the Committee. The 5th Resolution of the Convention was "that the School Journal ought to be in the hands of every family, and that as individuals we will use our best endeavors to extend its circulation." The meeting was addressed by his Excellency, Governor Eaton, as were also those at Quechee and Chester. Of the two last named we have received no official account. The subjects brought before them were somewhat similar to those presented at Williamstown and Bethel. At Quechee, near the close of the meeting, a resolution was introduced by an individual: That we discard public corporal punishment in our schools. Three or four persons spoke in its favor, but it received but little sympathy from the audience, and was laid on the table.

The meetings in this County were not as fully attended as were those at Williamstown and Waitsfield, and yet a good number, considering the season, were present, and we doubt not that they will be productive of good. The public mind needs to be informed on various points in relation to the improvement of our schools; and Conventions where these points are brought up and discussed, will serve to arouse public attention and disseminate much valuable information. It was highly gratifying to the friends of education present at these Conventions to be favored with the presence and counsel of the State Superintendent, and we doubt not that much good will result from visits of the kind in various parts of the State, and hope he will be able to repeat them.

At the Convention held at North Chester, a Teachers' Association for the Southern District of Windsor County was organized, with the expectation that a similar organization will soon be effected in the Northern Probate District. We copy the Constitution, &c.

CONSTITUTION.

ARTICLE 1. This society shall be designated by the name of the Teachers' Association for the Southern District of Windsor County.

ART. 2. The meetings of this Association shall be held semi-annually, on the fourth Thursdays of April and October, at such places as the Executive Committee shall direct. The meeting in April shall be designated as the annual meeting at which all officers shall be elected. Special meetings may be called by the Executive Committee, whenever they may deem it expedient.

ART. 3. The officers of this Association, shall be a President, two Vice-Presidents, a Recording and Corresponding Secretary, Treasurer, and Executive Committee of five, who shall be elected annually, by ballot or otherwise. The President and Secretary shall be, *ex officio*, members of the Executive Committee.

ART. 4. It shall be the duty of the Executive Committee to call all meetings of the Association; to propose subjects for discussion; appoint persons to deliver essays on such subjects as may be ordered by the Association; and transact all necessary business. Three of the Committee shall constitute a quorum.

ART. 5. At each meeting there shall be one address or more, pertaining to educational interests, together with essays and discussions. Each address shall be delivered by some person appointed by the Executive Committee.

ART. 6. Any person may become a member of this Association, by signing this Constitution.

ART. 7. This Association may adopt such By-Laws, and make such alterations as shall be deemed proper, at any regular meeting, by a majority of the members present.

BY-LAWS.

No. 1. Each member of this Association shall furnish the Secretary with a written communication, consisting of at least one page of letter-sheet, to be preserved on file.

No. 2. All communications from members shall be written on letter-sheet with margins one inch in width.

No. 3. Each member if not able to attend the regular meetings of the Association, shall communicate with the Secretary at least once in each year; and in case of a change of residence, it shall be the duty of the member to notify the Secretary thereof.

OFFICERS.

SAMUEL H. PRICE, Esq., Windsor, <i>President</i> .	
Rev. H. C. WOOD, A. M., Springfield, }	<i>Vice</i>
C. B. SMITH, Esq., A. M., Ludlow, }	<i>Prst's</i>
Rev. DARIUS FORBES, Chester, <i>Rec. and Cor. Sec.</i>	
Dr. JAMES ROBBINS, Chester, <i>Treasurer</i> .	
ALBERT D. HAGER, Esq., Reading, }	<i>Com. mittee.</i>
RUFUS F. ANDREWS, Cavendish, }	
Miss MIRIAM E. JACOBS, Chester, }	
Miss RHODA P. WARNER, Andover, }	
Miss LUCIA A. NICHOLS, Weathersfield, }	

THE ASPIRATED "H" Mrs. Crawford says she wrote one line in her song, "Kathleen Mavourneen," for the express purpose of confounding the Cockney warblers, who sing it thus:—"The orn of the outer is eard on the ill;" but Moore has laid the same trap in "The Woodpecker"—"A art that is umble might ope for it ere."

For the School Journal.

American Dictionaries.

No. I.

But a few years have elapsed since it was sneeringly asked, by one of the most popular English periodicals, "Who reads an American book?" an inquiry that every tyro can now satisfactorily answer; and not only so, but another question, still more important, may be thrown back on the English reviewer, "Who looks to American authority for the etymology and meaning of the English tongue?" The great work of Dr. Webster has cast most of the English lexicographers into the shade, while Worcester has been no less usefully employed in correcting and settling the orthoepy of our language. Whatever, then, may have been the case thirty or forty years ago, we have certainly now no reason to be ashamed either of the quantity or quality of our contributions toward the common stock of English literature.

My present object, however, is neither eulogy nor depreciation. It is simply to aid teachers and others in making a profitable choice among the great variety of English dictionaries which load the shelves of the bookseller. With that view I propose to offer, in a series of numbers, an analysis of such works of this nature as seem most deserving the attention of schools, whether for the service of the several pupils, or for general reference on the table of the teacher, or in the school library. After a brief examination of the works separately, I shall take a comparative view of the whole ground. I commence with Webster's complete work entitled,

An American Dictionary of the English Language: containing the whole vocabulary of the first edition in two volumes quarto; the entire corrections and improvements of the second edition in two volumes royal octavo; to which is prefixed *An Introductory Dissertation* on the origin, history and connection of the languages of western Asia and Europe, with an explanation of the principles on which languages are formed. By Noah Webster, LL. D., &c. *General subjects of this work:* I. Etymologies of English words, deduced from an examination and comparison of words of corresponding elements in twenty languages of Asia and Europe. II. The true orthography of words, as corrected by their etymologies. III. Pronunciation exhibited and made obvious by the division of words into syllables, by accentuation, by marking the sounds of the accented vowels, when necessary, or by general rules. IV. Accurate and discriminating definitions illustrated, when doubtful or obscure, by examples of their use, selected from respectable authors, or by familiar phrases of undisputed authority. Revised and enlarged, by Chauncey A. Goodrich, professor in Yale College. With pronouncing vocabularies of Scripture, Classical, and Geographical names.

This title is so copious and complete as almost to remove the necessity of further analysis. I shall therefore, principally confine myself for the present, to a notice of the changes in the orthography of the language proposed by Dr. Webster, about which so much has been said and written. Such a notice is rendered the more necessary, as the present edition differs on this point from those published in the life time of the author. I quote from the Preface of the present editor.

"The changes in our orthography recommended by

Dr. Webster, are of two distinct kinds, and rest on very different grounds." "His main principle was, that the tendencies of our language to greater simplicity and broader analogies ought to be watched and cherished with the utmost care. He felt, therefore, that whenever a movement toward wider analogies and more general rules had advanced so far as to leave but a few exceptions to impede its progress, those exceptions ought to be set aside at once, and the analogy rendered complete. On this ground he rejected the *u* from such words as *favour, labour, &c.* Of these we have a large number, which come to us, in most cases, from Latin terminations in *or*, through the Norman French, but encumbered with a silent *u*, as in *emperour, authour, editour, &c.* From this entire class, except about twenty words, the *u* has been gradually dropped; and in respect to these, scarcely any two persons can be found, however strenuous for retaining it, who are in practice consistent with each other, or with themselves, as to the words in which this letter is used. In fact, we have reached a point, where, unless we take Webster and the dictionaries which agree with him as a guide, we have no standard on the subject; for Johnson, Walker, and others retain the *u* in numerous words, into which no one would think of introducing it at the present day. Public convenience, therefore, demands that we do at once what must ultimately be done. No one can believe that the progress of our language will be arrested on this subject. The *u* will speedily be omitted in all words of this class, unless from the sacredness of its associations, it be retained in *Saviour*, which may stand for a time as a solitary exception. Nor is it Dr. Webster who is the innovator in this case, but the English mind, which has for two centuries been throwing off a useless incumbrance, and moving steadily on toward greater simplicity in the structure of our language. Such too, is the case with certain terminations in *re*, pronounced like *er*; as *centre, metre, &c.* We have numerous words of this class derived from the French, all of which originally ended in *re*; as *cider, (cidre,) chamber, (chambre,) &c.* These have been gradually conformed to the English spelling and pronunciation, till the number in *re* is reduced to not far from twenty words with their derivatives; and in respect to them also the process is still going on. *Center* is to a considerable extent, the spelling of the best mathematical writers. *Meter* is the word given by Walker in his Rhyming Dictionary, from a sense of the gross inconsistency of attaching to this word and its derivative *diameter* a different termination. Others are gradually undergoing the same change. Dr. Webster proposes, therefore, to complete the analogy at once, and conform the spelling of the few that remain to the general principles of our language. *Acre, lucre, and massacre*, present the only difficulty, from their liability if changed, to be mispronounced, and may therefore, be suffered to stand as necessary exceptions. Another departure from the principles of English orthography which Dr. Webster has endeavored to correct, is one that was pointed out by Walker in very emphatic terms, nearly fifty years ago. The principle in question is this, that in adding to a word the formatives *ing, ad, er,*

&c. a single consonant, if one precedes, is doubled when the accent falls on the last syllable, as in *forgetting, beginning*, &c. but is not doubled when the accent falls on any of the preceding syllables, as in *benefiting, gardening*, &c. Walker, in his fifth Aphorism, says, "Dr. Lowth justly remarks, that an error frequently takes place in the words *worshipping, counselling*, &c., which having the accent on the first syllable, ought to be written *worshipping counselling*. An ignorance of this rule has led many to write *bigotted* for *bigoted*; and from this spelling has frequently arisen a false pronunciation. But no letter seems to be more frequently doubled improperly than *l*. Why we should write *helling, levelling, revelling*, and yet *offering, suffering, reasoning*, I am totally at a loss to determine; and unless I can give a better plea than any other letter of the alphabet for being doubled in this situation, I must, in the style of Lucian in his trial of the letter *T*, declare for an expulsion." These were the deliberate and latest opinions of Walker. If he had taken the trouble to carry them into his vocabulary, instead of relying on a mere remark of this kind for the correction of the error, —if he had simply stated under about forty verbs, how the participle should be spelt, (for he did not give participles in his Dictionary,) and had altered six or eight words, as *worshipper* into *worshiper*, and *traveller* into *traveler*, &c. the error would probably by this time, have been wholly eradicated from our orthography; and Dr. Webster would have escaped much ignorant vituperation, for following in the footsteps of Walker and Lowth. Walker also says in his Aphorisms, "Why should we not write *dullness, fullness, skillful, willful*, as well as *stiffness and gruffness*?" The principles of our language plainly require us to do so. And Dr. Webster felt that the change might easily be made. The words which need to be reduced to this analogy are only about eight in number, including *installment* and *enthrallment*, which, if spelt with a single *l*, are liable to be mispronounced *instalment*, &c. Again, the words *expense, license, recompense*, which formerly had a *c* in the last syllable, have now taken an *s*, because the latter consonant is the only one used in the derivatives; as *expensive*, &c. A similar change is needed in only three words more to complete the analogy, namely, *defense, offense, and pretense*; and these Dr. Webster has changed. It is sometimes asked, "Why not change *fence* also?" For the simple reason that the derivatives are spelt with a *c* as *fenced, fencing*; and the word, therefore, stands regularly with others of its own class. Finally, Dr. Webster proposes to drop the *u* in *mould* and *moult*, because it has been dropped from *gold*, and all other words of the same ending. Such are the principal changes, under this head, introduced by Dr. Webster into his Dictionary. In the present edition, the words are spelt in both ways, for the convenience of the public, except in cases where this seemed to be unnecessary, or was found to be inconvenient. These changes, considering the difficulty that always belongs to such a subject, have met with far more favor from the public than was reasonably to be expected. Most of them have been extensively adopted in our country. They are gain-

ing ground daily, as the reasons by which they are supported are more generally understood; and it is confidently believed that, being founded in established analogies, and intended merely to repress irregularities and remove petty exceptions, they must ultimately prevail.

"The other class of changes above mentioned rests on a different basis,—that of *Etymology*. These will be estimated very differently, according to the acquaintance of different persons with the languages from which the words are derived. When Dr. Webster substituted *bridegroom* for *bridgroom, fether* for *feather*, &c. the German critics highly applauded the change. They predicted its speedy and universal reception, because similar improvements, on a much broader scale, had been easily made in their language. But Dr. Webster found the case to be widely different among us. After an experiment of twelve years, he restored the old orthography to a considerable number of such words. In the present edition it is restored in respect to nearly all that remain, from the full conviction, that however desirable these changes may be in themselves considered, as they do not relate to the general analogies of the language, and cannot be duly appreciated by the body of the people, they will never be generally received."

The necessity for an American Dictionary of the English language is sufficiently apparent. Many of our institutions are new, and peculiar to this country. New names to express them are of course indispensable; but to look for these in an English Dictionary would be labor thrown away. Nor is this remark confined to the adoption of new terms for new ideas. Many old English words have necessarily acquired a new sense in this country, being applied to things of the same nature, though modified by the difference of laws and customs. Take for instance, the word *Senate*. In Europe it simply means a legislative body; but in this country it is restricted to the smaller branch of the legislature. Hence, were an Englishman to learn that Vermont, until of late years, had no *Senate*, he would be apt to form a very inadequate idea of her frame of government previous to 1836. On the other hand, many words defined correctly for an English Dictionary, would be found imperfect or incorrect in an American one. "Thus the English dictionaries inform us, that a *justice* is one deputed by the king to do right by way of judgment—he is a *lord* by his office—justices of the peace are appointed by the king's commission—language which is inaccurate in respect to this officer in the United States. So constitutionally is defined by Chalmers, *legally*; but in this country the distinction between *constitution* and *law* requires a different definition." When these things are taken into consideration (independently of the false pronunciation of Walker,

* Is it correct to call the Senate the *higher* or *upper* house? Is not this an idea borrowed from the English form of government, where the term *has* a meaning, which does not exist in that of the United States? Certainly the expression derives no sanction from any of the American constitutions. In two of them the House of Representatives is designated "the most numerous branch," but the terms *upper, higher, or lower* are nowhere to be found.

which taints all the reprints of English dictionaries, and which will be distinctly shown in a future number) the reprinting of English dictionaries in this country is wholly inexcusable, and still more so their introduction into our schools.

The mechanical execution of this work furnishes a striking example of the highly improved state of the American press, both in respect to economy and beauty. Here we have a well-bound quarto volume, containing more than double the printing of a Bible, at the small price of \$6, while the clearness of the type and paper, and the distinctness and uniform color of the impression, entitles the book to be considered a very gem of typography. P.

Pittsford, May 27, 1848.

For the School Journal.

A word to the Children who attend School.

Children, this piece is written expressly for you. Perhaps your Teacher will read it to you in school. I have a little advice to give you; and if you will follow it, perhaps I will write another piece for you in the School Journal, sometime. I notice that some children are thought much more of, and are loved by people generally much better, than others. And it seems to me a very desirable thing, to be thought well of, and loved by the good. There is a text somewhere in the Bible, that says "A GOOD NAME is better than precious ointment." And these were the words of the "wisest man;" do you know who he was? See if you can find that verse.

But how can you get this GOOD NAME? Perhaps you say your name is good enough, and if it does not sound quite as well as *Horace*, or *Sarah*, or some other, it is the name that was given you, and you must make the best of it. But that is not what I mean; the name they call you by is well enough, I dare say; I mean your *reputation*,—what people say of you. I want you should *deserve to be loved*. Good looks will not gain love, but good actions.

The advice I have to give now is, BE RESPECTFUL; show good manners. This will go a great way in gaining the love and good will of others. I am among children a good deal, and I notice a very great difference in them in this respect; and I cannot help feeling differently toward them. I visited a school some time ago, of which I will tell you a little. Before I reached the school house, I passed a boy, and he sprang on to the back of the sleigh to ride. I asked him if he went to school, and he said, "Yes." "Who teaches your school," said I. "Miss ——" he answered. "And does she teach her scholars to say Yes, and No?" "No, sir," he said. I went into the school, and the scholars sat and stared at me, till they almost looked me out of countenance. When the boys came in, it was in a rude boisterous way, opening and shutting the door with a great noise; then some of them would wear their caps quite to the seat, then throw them down where they would be in the way perhaps. And the girls,—I thought the girls would be more genteel,—but the girls did very much in the same way. Both girls and boys had the same uncivil way of speaking. When they replied to their

teacher, it was was with a blunt "Yes, or No." And the same to me. And then when the school was done,—Oh, what a noise! Their actions to each other were rude and uncivil, and their language coarse and vulgar. I expected this, for one of these bad things is seldom found alone; they are apt to go together.

I visited another school, and you can't think how different it appeared. When I went in, they all rose up respectfully and made obeisance:—how could I help feeling well toward them the first moment! Then they all sat down quietly, and applied themselves diligently to their books, as if they went to school on purpose to learn. When they replied to a question, it was, "Yes, sir," or "No, sir," or "I don't know, sir"; and all after that sort, *respectful*. And their language and deportment to each other was respectful and kind and obliging. And their lessons were generally well recited: I expected this; for things of the same sort are apt to be found together in children. And then in passing some of the children after school, I asked them to ride; they looked up and said, "No, sir, I thank you, it's but a little way, we stop at the next house." I was not surprised at the answer, for it was so like what I had seen in the school room.

Now children, which do you think I remember most kindly and affectionately, the children of the first school or last mentioned? Which would you? which would *any body*? Now the children of the first school, had names that sounded as well to the ear, and their faces, at first, looked about as well,—I am not sure they were quite as well *washed*, or heads as well combed,—but the words and actions made the great difference. Were either of those, the school that you attend?

If you would get the good name we spoke of, always be *respectful*, and *mannerly*. Don't be afraid, boys, of bending your backs a little, and *bowing*. I do think better of those little boys who doff their hats and "make a bow," when I pass them, and those little girls who drop a respectful courtesy, than of those who take no notice, or keep right on with their noisy talk, or call out in an uncivil way, as I am sorry to say some do. Children, I am your friend; I am anxious you should *deserve to be loved*; will you practice my advice! You can easily remember it; here is the substance of it: Never say "Yes" and "No" to superiors; *never use vulgar words*;—*cultivate good manners*;—BE RESPECTFUL TO ALL.

R. C.

AN INVALUABLE LESSON TO STUDENTS.—What you do know, know thoroughly. There are few instances, in modern times, of a rise equal to that of Sir Edward Sugden. After one of the Weymouth elections, I was shut up with him in a carriage for twenty-four hours. I ventured to ask him what was the secret of his success. His answer was, "I resolved, when beginning to read law, to make every thing I acquired perfectly my own, and never to go to a second thing till I had entirely accomplished the first. Many of my competitors read as much in a week; but at the end of twelve months, my knowledge was as fresh as on the day it was acquired, while

theirs had glided away from their recollection."—*Memoirs of Sir T. F. Buxton.*

For the School Journal.

Leaves from the Life of the School Teacher.

NO. 3.—METHOD OF INSTRUCTION.

It is to be hoped that the old practice of confining a scholar in recitation, exclusively to the words of his text-book, is gradually being eradicated. Certain we are, that there is nothing more subversive of independence of thought, and correct mental discipline, than this same method. When we have seen it employed, we could think of nothing it resembled so much, as the dancing of puppets. The teacher pulls the wires when he asks the questions, and forthwith the automaton figures begin their gyrations.

The object of study is, first, to give knowledge of the subject investigated; and second, the intellectual training which arises from application. Now the effect of the above method of instructing, is this. The pupil accepts *on trust*, the information contained in his text-book. Instead of digesting and appropriating it to his own intellectual growth, he barely commits it to memory. Therefore, remove him from his book, by proposing inquiries not inserted there, and he is at a loss at once.

We have known teachers, whose grand object it seemed to be, to display at a final examination, (!) the attainment of their scholars during a session. They have only cared that they should be able to repeat rules, principles and examples, *by numbers*, leaving out all explanation and demonstration. As if the amount of a man's knowledge were to be estimated by the retentiveness of memory he displayed in respect to abstract ideas? But if this be the true object of study, that parents may gape with wonder at the apparent progress of their offspring, we know of no better means for a teacher to render himself a *Prodigy*. How much *real* credit such an one may deserve, or will be inclined to attribute to himself—if he be a person of sense—is quite another question. He will have this satisfaction, however, that in these days of *quackery*, his particular *nostrums* have been gulped down with a grace.

There has been much complaint about the deficiency of school books—and we think with reason—but the teacher's responsibility will be, by no means decreased, even when the very best are furnished. The truth is, if a teacher understands a subject himself, and has a faculty of communicating information, he will not confine himself to any book. And there is reason in this. To the pupil, the words of the author appear cold and arbitrary—they want life and expression. They are bones of the skeleton, and it is reserved for the teacher to clothe them with the warmth and glow of health—the beauty of proportion, and the attractiveness of living, speaking thought.—This he may do, by comparison and illustration. He must enter into the subject with his pupils, and assist their investigations. Enter it, too, not as one *superior* to them, but as one like them, searching for the truth—meeting with them, the same difficulties, and himself putting forth efforts commensurate with their powers.

Another benefit derived from this course, is the ease of retaining impressions, which it gives to the instructed. They assume individuality—as incarnation. If their instructor is what he should be, pupils will delight to call him to mind in after life. And with him, are associated all the words of counsel and knowledge he uttered in their presence. They remember the expression of his countenance, as he made this or that observation, and they can often repeat his very words. Teachers too often forget that they are among imitative beings, in this and many other respects. They are daily making impressions never to be erased.

There are two extremes to be avoided in communicating instruction. The one is, the rendering of assistance where it is not needed, and when it will only foster a feeling of dependence—and the other, is the denial of aid, when it *should* be given. In the first case, the pupil acquires the habit of applying to his teacher, whenever he meets with the least difficulty, and he also loses the strength gained by a successful contest with obstacles. We all know the pride and satisfaction, with which we look back upon hindrances removed or surmounted. We are filled with confidence in our own powers, and go forward with hope to new endeavors. This feeling is one of which the scholar stands in need, and he should not be deprived of it. In the last case, the evil is not so great, to a certain class, at least. Those who are determined to conquer by application, *will not yield*. But there are others—and not the few—who are soon discouraged. And this arises, in many instances, from defect in former discipline. They have been accustomed to call upon their teacher, at the slightest trial of their powers. It has been granted; and those powers have had no opportunity to be developed. Now, the way to remedy this injury, is not to refuse them entirely. But rather to encourage them, by pointing out the difficulty, and showing them where to employ their energies. They will be grateful for the smallest ray of light, and will again apply themselves with renewed spirit.

INSTRUCTION AND AMUSEMENT are more blended than the world in general, is apt to imagine. Uninstructive amusement may be afforded for a moment by a passing jest or a ludicrous anecdote, by which no knowledge is conveyed to the mind of the hearer or the reader; but the man who would amuse others for an hour, either by his writing or his conversation, must tell his hearers or his readers something that they do not know, or suggest to them some new reflection upon the knowledge they have previously acquired. The more the knowledge bears upon their pursuits, upon their occupations, or upon their interests, the more attractive it will be, and the more entitled to be called useful.

"I have," says Dr. Arnold, "just been looking over a newspaper. One of the most painful and solemn studies in the world, if it be read thoughtfully."

No man is a finished workman if he is ignorant of the theory on which he practices.

Spare the Birds.

BY REV. G. W. BETHUNE, D. D.

Spare, spare the gentle Bird,
Nor do the warbler wrong,
In the green wood is heard
Its sweet and gentle song;
Its song so clear and glad,
Each list'ner's heart has stirred;
And none, however sad,
But blessed that happy bird.

And when at early day
The farmer trod the dew,
It met him on the way
With welcome blithe and true:
So, when at early eve,
He homewards wends his way;
For sorely would he grieve
To miss the well-loved lay.

The mother, who has kept
Watch o'er wakeful child,
Smiled as the baby slept,
Sooth'd by its wood notes wild;
And gladly had she flung
The casement open free,
As the dear warbler sung
From out the household tree.

The sick man on his bed
Forgets his weariness,
And turns his feeble head
To list its songs, that bless
His spirit like a stream
Of mercy from on high,
Of music in the dream,
That heals the prophet's eye.

Oh! laugh not at my words,
To warn your childhood's hours;
Cherish the gentle birds,
Cherish the fragile flowers:
For since man was bereft,
Of Paradise, in tears,
God the sweet things hath left,
To cheer our eyes and ears.

Mathematical Questions.

The solutions of the two questions in your May number by H. C. P. and S. Keith, are correctly performed, but not in the manner I wished. My object in offering them was to excite thought. But very little of this is drawn out by the use of *Position* or of *Algebra*. Both processes are too mechanical. It is desirable, I think, that *Position* should be expunged from our books of arithmetic. At all events, I wish to see all the problems I offer solved by *arithmetical analysis*, showing the reason for every step. In future, I shall take care to mention this more distinctly.

P.

Solution of 1st Question in the April No.

	\$	Shares.
To C	360	
To D		1
To B	360	1
To A	790	2 less 1000
Total,	\$ 1440	4 less \$ 1000; or \$ 440 and 4 shares.

Consequently the 4 shares worth \$2080, and each share \$520, which gives to A \$760, B 880, C \$360, and D. \$520; total \$2520.

Solution of 3d Question in March No.

Interest of \$ 1376, 5 months,	\$ 34 40
" " 2560, 8 months,	102 40
Interest of \$ 3936, 5 and 8 months,	\$ 136 80
Interest of \$ 3936, 10 months,	196 80
Extra interest on \$ 3936,	\$ 60 00

Now, as this *extra* interest must exactly balance the *loss* of interest by shortening the unknown payment from 13 to ten months, the \$60 is given as the interest of this payment for three months, by which it appears to be \$4000, and consequently the sum to be paid \$7936.

Solution of 2d Question in March No.

By the bargain, the person is to pay \$4500, retaining it a year, in which time it may gain for him \$270 at 6 per cent. In place of that, however, he pays \$1500 in cash, consequently ought to be allowed to retain the remaining 3000 till it gain \$270. But this \$3000 is to be paid at four equal periods; consequently the first payment of \$750 should gain 1 part of the \$270, while the second \$750 should gain 2, the third 3, and the fourth 4 parts, in all 10 parts into which the \$270 is to be divided. Each part therefore = \$27, and the whole question may be thus expressed: in what time will \$750 gain \$97 at 6 per cent.? a question which every tyro can solve. Answer $7\frac{1}{2}$ months.

Solution of 2d Question in April No.

Every pound of 13 parts pure reduced to 9 parts pure throws out 4 parts pure; and every pound of 8 parts pure requires 1 part pure to raise it to 9 parts pure; therefore 4 pounds of the latter must be added to 1 pound of the former. Consequently $4 \times 7\frac{1}{2} = 30$ is the answer.

I offer the following question to be solved by *arithmetical analysis*. A principle very useful in business is involved in its solution, which I have never seen noticed in any book.

I once had an untold sum of money lying before me. From this I first took away the third part, and put in its stead \$50. A short time after, I took from the sum, thus augmented, the fourth part, and put again in its stead \$70. I then counted my money, and found \$120. What was the original sum? and what useful principle is involved in the question?

Pittsford, May 20, 1848.

P.

INSECT COMFORTS. Insects generally must lead a truly jovial life. Think what it must be to lodge in a lily. Imagine a palace of ivory or pearls, studded with pillars of silver and capitals of gold, all exhaling such a perfume as never rose from a human censer. Fancy, again, the fun of tucking yourself up for the night in the folds of a rose, rocked to sleep by the gentle sighs of the summer air; and nothing to do when you awake, but to wash yourself in a dew-drop and fall to and eat your bed-clothes.

A POSER. A young urchin in a Scottish school, whilst cyphering on his own slate, put the following poser to his teacher: "Where dia a' figures gang tae fin they're rubbit out?"

THE AGRICULTURIST.

For the Vermont Agriculturist.

Management of Grafted Trees.

CORNISH, N. H., June, 30, 1848.

MESSES. EDITORS:—Through the columns of your Journal, I should like information respecting the treatment of trees that have been grafted. It is well known by all who have practised grafting, that soon after a limb has been cut off, sprouts will start from the stock; and the question is, ought these to be immediately removed or remain a year? From those who have had some experience, I, and I presume many others, would like to hear on this subject.

Yours, &c.

B. C.

REMARKS.

Such sprouts should be removed, and the sooner the better. Whether in grafting large trees, all the limbs should be at once cut away, so as to leave nothing to grow but the scions, may be a question; indeed it is generally thought better to make the change more gradually, say in two seasons. But there can be no doubt in regard to the removal of all the young shoots near the scion.

The circulation between the stock and scion is at first slow and imperfect,—often so imperfect that a slight diversion of the sap in another direction may destroy it entirely. Sometimes for several weeks, there will be just enough communication between the two to keep the scion fresh, till, by very slow degrees, the connection becomes more perfectly established, when the buds swell and the scion starts off beautifully. If, in such circumstances, the shoots that our correspondent speaks of, are allowed to grow, it is hardly probable that the scion will ever put forth. These shoots being in a state of vigorous growth, and furnished with an abundance of healthy leaves, (suction pumps, in some sense,) the sap will be all drawn to them. It is a general principle in vegetation that a strong plant or a strong shoot starves its neighbors. The same principle applies in the case of scions already growing. If shoots that have a stronger connection and a freer circulation than the scion are allowed to grow, they will inevitably overmaster and dwarf the scion. And even when the balance is in favor of the scion, a shoot of that kind, robs it, and prevents the best success.

A scion may be regarded as a young tree, of which the stock is the root. These shoots near its insertion are analogous to suckers (rightly named) at the roots of a tree, which no good cultivator ever thought of allowing to grow.

Some think it may be well to let these robbers flourish for a while, say the first season, and then remove them. But it should be remembered that the subsequent growth depends very much on the vigor of the beginning,—just as in animals, if you would have a hog or an ox of large and vigorous growth, you take care not to starve the pig or the calf. It is on this principle that cultivators tell you to select young and vigorous stocks for engrafting. If a scion is made to grow in a scrubby stock or half dead limb,

it can never become vigorous and will be short-lived. A thrifty scion can much better endure a sucker (robber) in its neighborhood the second year than the first.

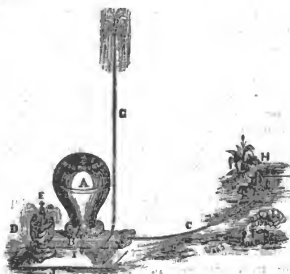
In another particular inexperienced cultivators are apt to err. Scions inserted near the ground should never be deprived of their side shoots or leaves during the first season. If taken off, the stem will run up tall and slender, and it will be impossible to get a stout body able to support a handsome head, when the head ought to be formed. If the side shoots are very vigorous it is well to pinch off the ends about this time.

Fruit trees, we believe, are making twice as much wood this year as last; and those who have young trees (especially of stone fruits) which they wish to bring early into bearing, will do well to stop the shoots by pinching.

P. S. It is suggested to us that the above remarks may be so understood as to induce too indiscriminate a war on shoots. There may be cases in which it would be better to pinch off the end of a shoot than to cut it close; but not when the grafting has been done with due consideration of the wants of the tree. A scion should not be set at the end of a long naked stick; but either near the root, or with small branches, or spurs, with leaves, near it. In default of such, new shoots may be used to furnish leaves, till the scion has plenty of its own, taking care to keep them within such bounds as to limit their action to that purpose.

Hydraulic Ram.

The most convenient, economical and beautiful contrivance that we know for raising water for farm and household purposes, is DOUGLAS'S IMPROVED PREMIUM HYDRAULIC RAM, represented in the following figure:



EXPLANATION OF THE CUT. B. D. A. E. I. the Ram.—J. the plank or other foundation to which the Machine is secured. H. spring or brook. C. drive pipe (from spring to Ram). G. pipe conveying water to house or other point required.

The object of this apparatus is to force a portion of a running stream of water to any elevation proportioned to the fall obtained. It is perfectly applicable where no more than eighteen inches fall can be obtained, yet the greater the fall applied, the higher

may the water be conveyed, the quantity raised varying in proportion to the height, with a given fall. It will raise, say one eleventh of the water, ten times the height of the fall to which it is applied. Thus if applied under a fall of five feet, with a supply of eleven gallons per minute, it will force up and discharge at an elevation of fifty feet from the machine one gallon per minute; and under the same head or fall it will of course raise and discharge a larger quantity of water in proportion as the height to which it is conveyed is diminished, and so a less quantity to a greater height.

We are sure that many of our readers will thank us for introducing to their notice this excellent contrivance. The following extract of a letter from Professor Morse, inventor of the Electric Telegraph, to the Patentees, is sufficient proof of the beautiful performance of the machine in practice:—

POUGHKEPSIE, N. Y., May 2d, 1848.

Gentlemen: I have had in use, for many months, one of your Hydraulic Rams. I introduced it here last Autumn, and have had hundreds of visitors who admired its operation! I consider the Hydraulic Ram as one of the most useful inventions I have known! I would not on any account part with mine, so indispensable do I consider it. I have all the advantages that New York derives from its invaluable Croton. Very respectfully, your obt. servt.

SAMUEL F. B. MORSE.

Mr. F. H. WARREN of this village is agent for the sale of the Hydraulic Ram, and is prepared to supply orders for the different sizes, wholesale or retail. Prices from \$8 to \$20.

For the Vermont Agriculturist.

American Institute.

Extracts from the Transactions.

WORN-OUT SOILS—CURING HAY.

The American Institute is more generally known in its connection with the mechanical and manufacturing interests of the United States. Its annual fairs, at the city of New York, have presented collections of machinery and manufactures from all parts of the Union, exhibiting the unrivalled skill and ingenuity of American citizens, and its liberal premiums have awakened from year to year an increasing emulation among our mechanics. But it is not so generally known, that the Institute is the liberal patron of the agricultural interest, and is probably doing more to encourage and promote improvements in that department, than any other institution in our country. A volume of 550 pages, of its Transactions, published last year, embraces reports of committees, and statements from practical and scientific farmers, from which much useful information may be collected, relative to almost every branch of farming; and, as the volume may not be accessible to many of your readers, I send herewith a few extracts, and may hereafter furnish others.

A farmer from Vermont reports in regard to improving worn out soils:—"In this district we have a great variety of soil. We have dry, sandy soil, which is very easily tilled, and is best for corn and rye. I

have known some fields planted for ten years in succession, and improve all the while from the application of a small quantity of lime, plaster, and wood ashes to the hill, either before or after weeding. This kind of soil will not retain manure more than two years, and the best way is to apply a little every season. We finally found great difficulty in getting grass seed to take root, on account of the soil becoming very dry; we find that by sowing in the spring from 10 to 12 bushels of wood ashes per acre, there is but little risk of a failure.

"Muck and coarse manure lasts longer than fine, in any soil. I find great advantage from spreading my straw upon dry lands; the grass and small grains are much improved by it. Muck is of little value on wet lands, straw and hot manures do the best. Muck is as well fitted for use, by exposure to the sun and frost as by any other process; unslacked lime will warm and make it sooner fit for use, but no better when on, than if put on separate."

"I find that all made, or alluvial soils, after becoming somewhat exhausted on the surface, are much improved by being turned up deeper; not by using a subsoil plough, but with a large, heavy one, that will bring the bottom up and turn the top under. The cheapest method of raising our interval land, we find, is to plow in a crop or two of clover. Always allow a good part of the seed to ripen before plowing:—nothing better for land that is intended for seeding down to grass, than to have it well filled with clover seed." "Clover on rich lands should be sown very thick; the stalks will be small, and the quality greatly improved. On poor lands we can hardly expect a crop without first furnishing an abundance of seed. The roots of clover, when the stalk is dead, furnish a manure for other grasses, and help to keep the land light and porous. The finer grasses, on the other hand, detract from the quality of the soil, as they take less from the atmosphere, and their roots only spreading out on the surface, allows the lower part of the soil to become dry and compact."

Mr. Robert L. Pell, an extensive and scientific farmer, of Pelham, N. Y., reports as follows:—"I report in as few words as possible of my process, for the benefit of those fond of trying experiments and desirous of getting in a crop of hay at an expense of five shillings sixpence (York currency) per ton. On Monday morning, July 6, at half past four o'clock, I commenced cutting a thirty acre field of timothy grass, and Saturday evening, the 12th, at seven o'clock, the contents of the field, seventy-five tons, was stowed away in my barn, for winter consumption; and I can assure you that it is in as perfect order as the sample now before you, presenting to the eye the same green appearance, which it will retain for years if kept from the light, with all its saccharine qualities unimpaired.

"I employed seven men and a boy who alternately mowed, spread, loaded the wagon, drew in, stowed away, &c. Immediately after the grass was cut, it was spread as thin as possible over the field, and was turned once before noon. At one o'clock it was raked into windrows and cocked; and at two o'clock, the wagon commenced drawing into the barn, where

it was packed, and was salted with from half a bushel to a bushel of salt per ton. At evening all the grass cut before three o'clock was drawn in and stowed, retaining all the nutritious qualities to form flesh, bone, muscle, and to promote growth in the animal to be fed upon it, having lost only 14 per cent. of water, which was partly replaced by salt. In fact, therefore, my hay is nearly as heavy as when it was standing in the field. The salt draws out the water which passes off by evaporation, and takes possession of the pores, adding to the weight of the hay, and curing it on the same principle that it does beef or pork."

This corresponds in some measure with a practice in some parts of Germany. Pits are dug in the earth 10 or 12 feet square, which are lined with plank and puddled with clay. Into this the green grass is put, just as it is cut. Four or five cwt. are thrown in at a time and sprinkled with salt at the rate of one pound each cwt. It is then well trodden down and rammed as close as possible at the sides with wooden rammers, and when filled, is covered closely so as to exclude the air. The grass speedily heats and ferments, and after a few days has the appearance of having been boiled, and has a sharp acid taste. It is greedily eaten by cattle and said to be very nutritious. See *Cultivator* 1844, page 228.

It is proper to remark however, that the practice of Mr. Pell is objected to by some farmers on account of its causing the cattle to eat too much salt; and a plan which seems to be more generally followed by many experienced farmers in New York, is to cure the hay principally in the cock. The process is simply to turn the hay in the swath once and to throw it into small cocks as soon as it is fairly wilted. Let it stand a day or two and then turn the cocks over partially opening them, and let them be thus exposed to the sun two or three hours in the middle of the day, when it is ready to be removed to the barn, and packed away with the addition of four to six quarts of salt per ton. This process is preferable for all kinds of hay, but particularly so for clover, as the leaves remain pliable and the stems do not become hard and wiry. If completely dried by exposure to the sun and frequent stirring, the leaves are crisped and rubbed off, and frequently very little is left of clover, except the dry hard stem. In curing medicinal herbs, it is thought best to cut them before they have past the bloom, and to expose them as little as possible to the sun and the air, consistent with their preservation, as their natural qualities are thereby most perfectly preserved; and the same reasons would indicate that the same course should be pursued with our hay crop. At no period is vegetation so full of nutritive juices as when in its mature bloom, and if cut at this period and cured with little exposure to the sun and air, most of the nutritive qualities will be retained, and the hay will be in the most palatable condition for stock. AGRICOLA.

MIGRATION OF EELS. The curious were startled the other day, by seeing a whole shoal of eels wending their way up the Deveron, to their summer retreats. The shoal was not less than 300 yards in

length, was of considerable breadth and depth, and was steadily passing upwards at the rate of about a mile an hour. No obstacles seemed to retard its progress. The mill-lead was traversed and the waterfall ascended. This interesting phenomenon is witnessed every year about this period, and shoals of several miles in length are at times seen. It is thus explained:—At the beginning of winter, the whole eel tribe descend from the upper parts of rivers, where the cold is most severe, to the mouth; where, amid the brackish water, they enjoy a less diminished temperature, and deposit their spawn. From these spring the young fry, to whom the warm weather forms a signal to ascend the rivers; and, in their upward progress, they congregate in such shoals as that above-mentioned.—*Banffshire (Eng.) Jour.*

For the Vermont Agriculturist.

Estimate of the Products of Vermont for 1847.

From the Report of the Commissioner of Patents.

Population, 302,000		Prices estimated here.	
Wheat,	Bushels, 664,000	1,25	\$830,000
Barley,	" 55,000	.50	27,500
Oats,	" 3,905,000	.33½	1,301,666
Rye,	" 350,000	.75	262,500
Buckwheat,	" 330,000	.50	165,000
Corn,	" 3,100,000	.83½	2,583,334
Potatoes	" 7,086,000	.25	1,771,500
Hay,	Tons, 1,250,000	6.00	7,500,000
Cocoons,	Pounds, 8,000		
Sugar,	" 10,500,000	.8	840,000

\$15,281,500

The above estimate does not embrace our staples—wool, butter, cheese, beef, pork, mutton, horses, &c., which, it is believed, would exceed in value the aggregate of the above items. But assuming the value of articles not estimated only equal to those which are estimated, and it will show the amount of our agricultural products equal to \$100 a year for each man, woman and child in the State. To what part of the West, or of the world, can our farmers emigrate and expect to do better? AGRICOLA.

Questions.

1. Is the worm that devours the leaves of the sugar maple, the same with that which infests the apple tree?
2. What is the best method of destroying either, or both?
3. What is the best time for planting the *Pinus balsamea*, or balsam tree? P.

It is a fact, (says the *Gentleman's Gazette*, Bombay,) that the entire population of India are not spending on their clothing more than sixpence per head per annum.

POWER OF STEAM.—It is on the rivers, and the boatman may repose on his oars; it is on highways and begins to exert itself along the courses of land-conveyance; it is at the bottom of mines, a thousand feet below the earth's surface; it is in the mill and in the work-shops of the trades. It rows, it pumps, it excavates, it carries, it draws, it lifts, it hammers, it spins, it weaves, it prints.

Researches on the fattening of Cattle, and the formation of Milk.

By three among the most distinguished men of the age,—Dumas, Bessingault, and Payen.

The result of their investigations is thus summed up. We have found by experiment that the hay contains more of the fattening matter than the milk which it goes to form, and that it is the same with the other rations on which the cows or milch asses have been put. That oil cake increases the production of butter, but is liable to make it less solid, and may give it the taste of vegetable oil, when there is too great a quantity of this food in the ration. That Indian corn possesses a power of fattening dependent on the large proportion of oil which it contains. That there exists the most perfect analogy between the production of milk and the fattening of animals, as the breeders of stock had anticipated. That, nevertheless, the fattening of ox turns to use less of the fatty matter or azotized substances than the milk cow. This last merits, in an economical point of view, by much the preference, when the question is to get from the pasture the greatest amount of food useful to man. That potatoes, mangel wurtzel, and carrots, only fatten in so far as they are joined with products containing fat substance such as straw, the seeds of cereal plants, bran or oil cake. That equal weights of gluten mixed with fecula and flesh rich or fat, produce an effect in fattening, which in the hog, differs in the ration of 1 to 2. All these results agree so completely with the opinion which holds that fatty matter passes in substance from the digestive canal into the chyle, and thence into the blood, the milk or the tissues—that it is difficult for us to imagine on what fact can be founded the idea that the fatty matter is capable of being formed from any substance by the animal itself.

Agricultural Societies.

MR. EDITOR:—The question has often arisen in my mind, are our agricultural societies performing their whole duty, and exerting all their influence in well directed efforts to promote the great interest for which they were organized? Would not the great mass of the farming community receive much more benefit from them, were they to adopt a different course in some particulars?

Assuming, what is evident, that that is best which is most profitable, let them award their premiums accordingly, instead of being governed exclusively by quantity or size, without taking into the account the cost of production. If any farmer raise eighty bushels of corn to the acre, at a cost of forty dollars, he assuredly deserves more praise for his skill, other things being equal, than another who raises ninety bushels at a cost of fifty dollars; yet it is customary I believe, to give the premium to him who raises the ninety bushels.

Again: granting that size and symmetry combined constitute a perfect animal, should not more regard be had to symmetry and cost of rearing, and less preponderance given to size, where animals are nearly equal in that particular?

But these things are of minor importance considered

in connection with the lamentable fact, that more light is needed by the tiller of the soil—that following pertinaciously the beaten track of his fore-fathers, he relies ten fold more on chance than on science in the production of his crops. Now it is greatly in the power of these societies to afford him that light, so far as practical facts are concerned; for certainly they are, or should be, in possession of many very important facts relating to every branch of agriculture pursued in our State. If they are not in possession of them, it is owing to their own remissness.

Now, Mr. Editor, what I intended in this communication to propose was: that each agricultural society in the State should firmly resolve, that no premium shall hereafter be awarded to any individual who shall not make a written statement of the manner of raising the crop or animal entered, together with a fair estimate of the cost; and that each society appoint a committee to prepare an abstract of all entries deemed worthy, on account of the excellence of the method pursued—and that the report of this committee be published, that the farmers in general may know how these large crops of corn and grain can be raised, with the profits accruing therefrom, and instead of despising every new improvement as emanating from "book farmers," "go and do likewise."

Albion, Feb., 1848.

[Maine Farmer.]

Cheese.

The States of New York, Ohio, Vermont and Connecticut, have become famous for the production of this article, and large quantities of it are manufactured for shipment to England, where it has superseded much of the Dutch and Irish cheese, with which for a century back, the aristocracy of England have supplied their tables. This cheese is made very rich and solid, so that it will keep a great while, and is in its highest state of excellence, when having been ripened and mellowed by a year's keeping. It is seldom seen in the northern markets, as a much more inferior article is more saleable here. What little there is of this cheese consumed in the United States, sells at about ten cents a pound by wholesale. In England, it readily brings from 17 to 20 cents, and has pretty uniformly paid a handsome profit, over cost, freight, duties and other charges. The reduction of the duty in England, which has enabled us to send such large quantities of cheese there within a year or two, has added considerably to the depression of Ireland, by breaking up their dairies, and it has lessened materially the profits of the Dutch farmers, who formerly from their proximity enabling them to watch the English market, supplied most of the foreign cheese consumed in it.—*Newburyport Herald*.

GATES. Every field on the farm should be entered by a good self-shutting and self-fastening gate. Farmers who are too busy in summer to make them, or to get them made, should see to it now. How long does it require to take down and put up a set of bars? At least two minutes—which if repeated three times a day for a year, amounts to thirty hours, or three days of working time, which would yearly pay

for a good gate. Or examine it in another point of view; three times a day is eighteen hundred times a year; now is there any man between Halifax and California, who would take down and replace a set of bare eighteen hundred times in succession, in payment for a farm gate? Hardly—yet this is the price yearly paid by those who use bars that are constantly passed, and the gate is not obtained by it. Again, how much better is a well hung gate than one half hung? or one with a good self-fastening latch, than one with a pin crowded into an auger hole! Try it, by dragging a badly hung gate over the ground, eighteen hundred times in succession; securing it each time with a pin, and see if you do not think this labor would pay for good hinges and a latch.

How to Sell Wool—Wool Depots.

Mr. BATHAM:—I have been engaged several years growing wool in a small way, and till lately have been troubled to find a market—the wool buyers making very little difference between fine and coarse wool, and less difference between clean washed and dirty.

Year before last, my sheep were washed and sheared in the best possible manner. The highest price offered for my wool at home was 31 cents per pound. I forwarded my clip to Messrs. Perkins & Brown, who that year established a depot for the sale of wool at Springfield, Me., they sold my wool to average 58 cents per pound, netting me 54 cents at home; 23 cents more than the highest offer I got here. Last season, in consequence of long continued rains soon after my sheep were washed, I was prevented from getting my wool off in as fine condition as the year before, and some deduction was made for dirt—after these discounts my wool bill averaged about 68 cents,—the grades ranging from 35 to 85 cents per pound—my fleeces weighing three pounds each, makes an average of more than \$2 per fleece.

The owner of one of the finest flocks in Washington county, Pa., Mr. Samuel Cole, informs me that his clip of last year at the same Depot, sold from 45 to 85 cents, averaging 79 cents per pound.

I am induced to send you this line, by seeing in your late numbers inquiries for a market for the sale of wool grown in the west.

Yours, &c., H. T. KIRTLAND.
Poland, O., March, 1848. [Ohio Cultivator.]

Popping Corn.

The oil in the berry portions of the grain is contained in little six-sided cells, in the form of minute drops, visible to the eye, under a good microscope.—When a grain of corn is heated to a temperature sufficient to decompose the oil, a sudden explosion takes place, and every cell is ruptured by the expansion of gaseous matters arising from the decomposition of the oil, and the grain is ruptured at the weakest point in the arch, and is completely evolved and folded back. Now, on examining the cells again, they will be found lacerated and swollen much out of shape. If any attempt is made to pop Tuscarora corn, it will be found never to succeed; hence I was able to prove this cu-

rious phenomenon so familiar to every child, though never understood by its parents, is due entirely to the decomposition of oil, and the formation of carburetted hydrogen gas, such as is sometimes used in lighting large cities. When Indian corn is hulled by means of potash lye, the oil next the epidermis of the grain is converted into soap and the epidermis is detached. The caustic alkali also liberates ammonia from the mucilage around the germ. When corn is made into whiskey the oil separates and rises to the surface. I have been informed that 100 bushels of corn yields from 15 to 16 gallons of oil. It is made on the borders of Lake Ontario, and has been used in the light houses on the lake. ELLSWORTH.

—Michigan Farmer.

THICK AND THIN SOWING. In a Prize Essay on Thin and Thick Sowing, lately written by Mathew M. Milburn, [England,] we extract the following, which has been deduced from well-tried experiments:

"1. That thin sowing, and especially dibbling, is a very unsafe process, as regards quantity per acre of produce. 2. That despite hoeing, where it can be practised, it encourages weeds. 3. That it grows coarser produce, and of less value to the miller. 4. That it does not ripen so early. 5. That on a sandy soil, very dry, and not productive, it was unsuccessful in the writer's own experience. 6. That on gravelly clay, on higher elevation, it was unsuccessful with Mr. Watson's experiment. 7. That on very productive land, in a rich state, it was also unsuccessful."

TO CURE SHEEP-SKINS WITH THE WOOL ON. Take a spoonful of alum and two of saltpetre; pulverize and mix them well together, then sprinkle the powder on the flesh side of the skin, and lay the two flesh sides together, leaving the wool outside. Then fold up the skin as tight as you can, and hang it in a dry place. In two or three days, as soon as it is dry, take it down and scrape it with a blunt knife, till clean and supple. This completes the process, and makes you a most excellent saddle cover.

Other skins which you desire to cure with the fur or hair on, may be treated in the same way.

LAYERS OF GRAPE VINES. An excellent way to propagate the grape is by layers. If this be done in May or early in June, the layers will get well rooted so that they may be cut saunder in August. Last year we had a Diana grape vine of moderate size, and put nearly all the vine down in layers, early in the season, and in the fall we had a large number of well rooted layers, which we set out this spring and are growing finely. This mode is much more sure than propagating by cuttings, which often start reluctantly, and from their feeble growth fall in time of drouth, or in the first winter.—Bost. Cultivator.

The Chinese affect to despise European ingenuity, but they cannot mend a common watch; when it is out of order they say it is dead, and barter it away for a living one.

Windsor County Natural History Association.

Reported for the School Journal and Vt. Agriculturist.

The Society met according to adjournment, at the Academy in Springfield, on Wednesday 14th of June. Prof. Wood in the Chair, N. B. Safford, Esq., Secretary pro tem.

Morning Session. A plan of conducting the business of the Association was presented and adopted.

Several gentlemen present signed the articles of the Association and became members.

Afternoon Session. The call of the different departments of Natural History commenced.

I. *Minerology.* The committee on the Ohio fossils presented by Mr. S. Tracy, reported progress, but asked leave for further time. The other two committees, viz. on the Baltimore mineral and the Windsor iron, were not ready to report.

Rev. D. Forbes was appointed a committee to report upon the lime-stone rock above Perkinsville.—The chairman presented some specimens from Springfield, of rock highly charged with sulphate of iron. Some interest had been excited at the locality from a spontaneous explosion, said to have occurred some time since at the place. Some discussion took place which resulted in an opinion that the sulphuret of iron which was once abundant in the rock had been acted upon by moisture, and decomposition effected, forming a sulphate of iron, and probably a sudden evolution of gaseous matter, the pressure of which had rent the ledge. The question arose in the mind of some of the members whether such may not be the case in many localities where strange noises are heard occasionally in rocky hills.

II. *Geology.* Some specimens were brought forward by the Curator. One, of the primitive limestone which abounds in this county, interstratified with mica slate. Its physical characters were said to be those of the Stockbridge limestone. Is now used for building, but will not answer where it would come in contact with earth, as the earthy acids disintegrate it slowly. It now gets the name among workmen of the blue granite.

Some peculiar forms of mica slate were noticed, one, called on this occasion the ligniform mica slate, seems to be quite a regular formation, and may be traced from the middle of Hartland to Springfield, being interrupted by the Ascutney. Another well characterized form lies east of this, and was alluded to as the tabular mica slate.

Several committees were appointed.

III. *Botany.* No reports or communications.—Some remarks made by the Curator on the ease with which collections may be made of plants, and urging the claims of this delightful branch of knowledge.

IV. *Ornithology.* No reports or communications. Some remarks were made and questions discussed by several gentlemen.

V. *Entomology.* No reports or communications. A standing committee on this branch was raised, consisting of Rev. D. Forbes as chairman, with liberty to fill the committee to five.

VI. *Conchology.* Several specimens of shells were presented and reported upon by the Curator. There

were three species of Unio—one of Anodonta and one of Alasmodonts.

VII. *Mammology.* The Curator reported upon the animal presented by Mr. Tinkham at the last meeting. It was the *Scalops aquaticus* of Linneus, or shrew mole. Dr. Knight exhibited a specimen of the *Condylura macroura* of Harlan, or star-nosed mole.

Adjourned.

The next meeting, being the regular quarterly meeting, will be held at Windsor on the 5th of July.

The Cattle Trade of New York.

The Cattle Trade of New York, though it makes no figure on 'Change, forms quite an item in our city's business. The new Market opened on the 6th ult., and the number of cattle entered for sale since that time, is as follows:

May 6 to May 8,	1755
Week ending May 15,	1747
" " " 22,	1089

We believe the larger numbers are unusual, and that 1000 to 1200 head weekly is about the average. Very few remain over from one sale to another. Monday is the great sale day, on which nearly all the cattle received up to that time are disposed of. What few remain over are generally sold during the week to chance customers, while the new arrivals are held in hand for the next sale day. The purchases are not made for our city alone, but Newark, Paterson, Bridgeport, New Haven, Hartford, Boston, &c., are regular buyers at these sales.

The various modes of computing the weight and value of the animals sold which are employed at different markets must often perplex and mislead a reader not specially made acquainted with them. At each market, cattle are reported as selling at so much per hundred weight, and Boston prices are often if not generally lower than those of New York, though the cattle sold at Boston (Brighton) are generally driven by if not actually bought here. The reason is that here nothing but the naked beef—'the four quarters'—is counted and paid for in the Market—the hide and rough tallow being thrown in to the buyer; while in Boston 'the five quarters' are counted—that is, the hide and tallow are computed in the selling weight and so paid for by the purchaser. On the other hand, a New York 'hundred weight' is 100 pounds avoirdupois; in Boston it is 112. (In Philadelphia, we believe, 'the four quarters' only are counted, while there the 'hundred weight' is 112 pounds.)

The cattle are sold alive, thus paid for and driven off by the purchaser, though only the 'four quarters' are allowed to enter into the computation. The rule is that 100 pounds in the gross weight on the hoof will give 55 pounds of beef, though the best cattle will of course exceed while the poorer will fall below this standard. Generally, however, the parties agree on the weight as well as the price in making their bargain, so that few cattle are actually weighed out to the purchaser.

The spectacle afforded by the cattle market on a sale day is an animating one. Here are drovers from Kentucky, Ohio, Illinois, and Western New York,

who have been from three to eight or ten weeks on the road, (driving on long routes only 10 or 12 miles per day.) They are generally well built, hardy, intelligent looking men, fairly but not nicely dressed; while their boys and other assistants in driving manifest considerable originality and entire independence in the matter of costume, though many of them are paying their respects to the great city for the first time. We did not inquire on this point, but we presume a drove from Kentucky which sells for 5,000 in our market will have cost nearly half that sum in travelling expenses from the time the cattle are collected to that when the driver reaches his home again.

Nearly all the cattle in the market at this season are Bullocks and Oxen.—*N. Y. Paper.*

PLANETS BETWEEN MARS AND JUPITER. The name of the new planet discovered in April, by Mr. Grahame, at Mr. Cooper's observatory, Ireland, is Metis, a Goddess who in the ancient mythology was considered the wisest of them all. As the new planet is the ninth known to exist between Mars and Jupiter, and the fifth that has been discovered within the last four or five years, we subjoin a list of the nine for the benefit of our young astronomical readers. The approximate elements of Metis, we gave in our paper of the 14th; it was copied from Schumacher's Journal, printed at Altona, (Hamburg) on the 1st, or only 13 days before.

<i>Vesta,</i>	{	Discovered early in the century, or about 1800.
<i>Juno,</i>		
<i>Pallas,</i>		
<i>Ceres,</i>	{	Discovered by Mr. Heincke in Germany, in 1844 and 1845.
<i>Astræa,</i>		
<i>Hebe,</i>		
<i>Iris,</i>	{	Discovered by Mr. Hind in London, in 1846.
<i>Flora,</i>		
<i>Metis,</i>		

—*Traveller.*

TO STOP BEES FIGHTING. I am a peace-man and a teetotaler, and will make known the best use to which ardent spirits can be applied. Put a little alcohol, or almost any kind of spirits, on the bottom boards around and under the hive of the belligerent bees, and it will allay their fury like a charm. Having heard of this remedy, I was induced to try it, and I found it a "fixed fact."—*Ohio Cultivator.*

Three Poets in a Puzzle.

I led the horse to the stable, when a fresh perplexity arose. I removed the harness without difficulty, but, after many strenuous attempts, I could not remove the collar. In despair I called for assistance, when aid drew near. Mr. Wordworth brought his ingenuity into exercise, but after several unsuccessful efforts, he relinquished the achievement, as a thing altogether impracticable. Mr. Coleridge now tried his hand, but showed no more grooming skill than his predecessors; for, after twisting the poor horse's neck almost to strangulation, and the great danger of his eyes, he gave up the useless task, pronouncing that the horse's head must have grown (gout or dropsy) since the collar was put on, for he

said "it was a downright impossibility for such a huge *os frontis* to pass through so narrow a collar!" Just at this moment a servant girl came near, and understanding the cause of our consternation, "La, master," said she, "you do n't go about the work in the right way. You should do this," when, turning the collar completely upside down, she slipped it off in a moment, to our great humiliation and wonderment, each satisfied afresh that there were heights of knowledge in the world to which we had not yet attained.—*Cottle's Recollections of Coleridge.*

The Markets.

BRIGHTON MARKET.—Thursday, June 22.

At market, 300 Beef Cattle, 15 pairs Working Oxen, 30 Cows and Calves, 900 Sheep, and 850 Swine.
Patcxs. *Beef Cattle*—Dull, and a falling off in prices; we reduce our quotations—extra, \$6 75; first quality, \$6 25 a 6 50; second, \$5 75 a 6; third, \$5 50.
Working Oxen—Sales at \$72, 92 and \$110.
Cows and Calves—Sales at \$23, 27, 30, 32, and \$37.
Sheep—Small lots at \$2 25, 2 50, 2 62, 2 88, and \$3 25.
Swine—Small lots to peddle 4½c for Sows, and 5½c for Barrows. At retail from 5 to 7½c.—*Daily Advertiser.*

WOOL. Boston, June 24.

Prime Saxony Fleeces, wash'd lb.	38	a	52
American full blood	do	36	a —
do 1-2 a 3-4	do	30	a 33
do 1-4 and com.	do	26	a 28
Lambs, Superfine,		30	a 33
Do. No. 1,		26	a 28
Do. No. 2,		20	a 23
Do. No. 3,		9	a 12

FOREIGN.

Smyrna, washed,	18	a	21
do unwashed,	10	a	14
Bengali,	8	a	9
Buenos Ayres,	6	a	15
Crimes,	8	a	10
Mexican,	12	a	13
Barbary,	25	a	—

—*Daily Advertiser.*

FANEUIL HALL MARKET.

WHOLESALE.				SEED—RETAIL.			
Beef, fresh, lb.	7	a	15	Apples, barrel,	3	00	3 50
Mutton, 1st qual.	6	a	8	do. dried, lb.	5	a	6
2d "	5	a	7	Beans, bush,	1	50	1 75
Lambs, each,	3	00	4 00	Pear, bushel,	1	00	1 25
Veal, lb.	5	a	8	Potatoes, barrel,			
Pigs, roasting,	1	00	1 25	Eastport,	3	50	4 00
Chickens, pair,	75	a	1 25	Common,	2	75	3 00
Turkeys,	75	a	1 25	White Dutch,			36
Geese, mongrel,	1	25	1 50	Southern,	8	a	9
Pigeons, dozen,	1	00	1 12	Lucerne, or French,			23
Pork, per 100 lbs.	5	50	6 00	Herdsgrass, bush	3	25	3 50
Lard, best, pr. bbl.	7	00	7 50	Red Top, bushel,			25
Western, keg,	7	50	8 00	Northern,	1	25	a
Butter, lump, lb.	20	a	25	Southern,	65	a	88
do. firkin,	18	a	20	Orchard Grass,	—	a	2 50
Cheese, new milk,	8	a	10	Fowl Meadow,	2	50	a
do. four meal,	5	a	6				
Eggs, doz.	—	a	14				

LIVERPOOL, JUNE 10. The small lot of Cheese offered sold readily at 40 a 45 6d per cwt., quality only middling.
 ASHES—Montreal Pot exceedingly scarce and advanced, 32s 6d to 34s given for small lots. Pearl so scarce that 60 bbls or less constitute the stocks, and 54s paid for a few bbls; these prices cannot be sustained when the new imports come forward.

Circular of Messrs. Baring, Brothers & Co.

LONDON, JUNE 9. No improvement in markets this week, while political affairs on the continent remain in the same state of uncertainty. Money continues plentiful. Corn market extremely flat, and Wheat declined 1s a 2s. For barrel Flour, no sale at present. Indian Corn fallen about £1 per ton in Ireland, owing to large arrivals, and it is difficult of sale at the moment. To-day's quotations, when there was very little doing, are,—Flour 25s a 26s per barrel, super best brand; 19s a 21s inf and sour; Indian Corn, 23s a 30s per 480 lbs.

CURIOUS ICELANDIC CUSTOM. The Icelanders have a curious custom, and a most efficient one, of preventing horses from straying, which I believe is peculiar to this island. Two gentlemen, for instance, are riding together without attendance, and wishing to alight for the purpose of visiting some object at a distance from the road, they tie the head of one horse to the tail of another, and the head of this to the tail of the former. In this state it is utterly impossible that they can move on, either backwards or forwards, one pulling one way, and the other the other, and therefore, if disposed to move at all, it will be only in a circle, and even then there must be an agreement to turn their heads the same way.

PLANTING TREES ON RAILWAY EMBANKMENTS.—It has been proposed in Scotland, to plant railway embankments with larch trees, which would supply the sleepers required from time to time, and would also return a profit from the thinnings, &c. which might be sold for hop poles or for any other purpose. Here, the chestnut, locust, &c., might be used instead.

BROOM CORN SUPERSEDED. A mechanic at the Ramapo river has invented a machine for making brooms, which, according to the Journal of Commerce, threatens to exterminate broom corn. It takes a billet of white ash, and in a trice cuts it fine like the Manilla grass as used for brushes. The brooms can be made for two cents each, and are said to work quite as well in every respect as corn brooms, and to be much more enduring.

Domestic Economy.

GENERAL DIRECTIONS FOR MAKING CAKE.

Do not use the hand to make cake, but a wooden spoon or spud. Earthen is the best to make cake in.

In recipes where milk is used, never mix sweet and sour milk, as it makes cake heavy, even when either alone would not do it. Butter in the least degree strong, spoils cake.

Try whether cake is done by piercing it with a broom splinter, and if nothing adheres it is done.

An oven, to bake cake well, must have a good heat at the bottom, and not be too hot on the top, or the cake will be heavy.

Cake that is to be frosted should be baked in pans with perpendicular instead of slanting sides. Line them with buttered paper, the salt soaked out of the butter. If the oven proves too hot, cover the top with paper before it hardens, or the cake will be heavy.

The best way to put in fruit is to sprinkle flour over it, then put in a layer of cake at the bottom, half an inch thick, then a layer of fruit, taking care that it does not touch the sides of the pan, and thus dry up; then a little more cake, then another layer of fruit, and thus till the cake is three inches thick (not more,) and let the top layer be cake.

Always dissolve saleratus, or sal volatile, in hot water, as milk does not perfectly dissolve it, and thus there will be yellow specks made.

TO REMOVE GREASE-SPOTS FROM WOOLEN CLOTHES. Make a thin paste of flour and water, and lay it on the tarnished places. It should remain sufficiently long to become perfectly dry, when, upon brushing it off with a stiff brush, the spot will have disappeared. If any remains of it are observable, the operation should be repeated. This is a very cheap and efficacious method of removing blemishes from clothes that have become soiled. The oily substance which accumulates so abundantly on the collars of coats and other garments, in consequence of the oleaginous quality of the hair, may be removed by this means, and the cloth re-indowed with all its primitive brilliancy and gloss. We have tried many experiments for removing grease spots from woollens, but none so expeditions and successful as the above.—*Mass. Obs.*

TO TAKE INK OUT OF LINEN. Take a piece of mould candle, or common candle will do nearly as well, melt it and dip the spotted part of the linen into the melted tallow. It may then be washed, and the spots will disappear, without injuring the linen.—*Boston Cultivator.*

HOW TO REMOVE RUST FROM FINELY POLISHED STEEL. Rub the spots with any kind of soft animal fat, and lay the articles by, wrapped in thick paper for two or three days; then, after cleaning off the grease with a piece of soft flannel, rub the spots well with powdered rotten stone and sweet oil, after which, the polish may be restored by rubbing with powdered emery on a soft leather; and the process may be finished with finely-powdered chalk, or magnesia.

TRY IT. It is said that a bowl containing two quarts of water, set in an oven, when baking, will prevent pies, cakes, bread, etc., from being scorched.

The Genesee Farmer says that a pounded onion will immediately relieve the pain occasioned by a scald or burn.

A BOILED INDIAN PUDDING, to be perfect, should be boiled six or eight hours. Put it to boiling before breakfast.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following
TERMS:

For a single copy, - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " " " - -	3 00
16 " " " " " " - -	4 00

And any greater number at the rate last named, or
25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. II.

WINDSOR, VT., AUGUST, 1848.

No. 4.

THE SCHOOL JOURNAL.

Report on School Houses.

The Committee appointed at the Common School Convention held at Bethel in June last, on the structure and arrangement of School Houses, make the following Report:—

The first thing relative to a good school-house which demands attention, is its location. This should be dry, quiet and pleasant, sufficiently remote from the public road to avoid its dust and danger, and yet be easy of access. Connected with it, should be a play ground of at least half an acre, and surrounded by a fence. This should be regarded as indispensable. To a certain extent, play is as essential to scholars as study, and a district which would have an attractive and quiet school, should provide for the one as well as for the other. The building should be of good architecture, and in material and workmanship, should bear a fair comparison with other public buildings, or with the better class of private dwellings. Suitable and *distinct* out-buildings for each sex should be provided, and kept under the strict supervision of the teacher.

For the plan of a school-house, the committee are unanimous in recommending substantially, the one approved and commended by Hon. Horace Mann, late State Superintendent of Common Schools in Mass. The same plan, the committee understand has, for substance, been approved by Hon. Wm. Slade, and also by many practised teachers. To an essay commending it in its leading features, was awarded in 1831, a prize by the American Institute of Instruction.

As a medium size, the committee have fixed upon a house designed to accommodate forty scholars. For this purpose a building is required (exclusive of the walls) 37½ feet in length and 26 in breadth. The entrance to the house should, if possible, be at the south, with the teacher's desk and platform at the north end and the desks of the pupils facing the teacher. On the wall behind the teacher, should be a plaster black-board, the whole width of the room, 4 feet wide; the space above this should be devoted to maps. It is obvious, therefore, that there should be no windows in this end of the building, the whole space being needed for purposes of instruction. A front light is also injurious to the eyes of children. The teacher's platform should extend the whole width of the house, 7 feet in width, 8 inches high, and be furnished with a moveable desk or table. Between the platform and

the first row of desks should be a space of four feet. The floor of the room should be level. The desks should be 2 feet in length, and range in height from 20 to 21 inches, and in width from 18 inches, including back, to 13 inches, and all but ¾ inches of the further side of each desk sloping one inch in a foot. Each desk should have a shelf for books underneath, an inkstand imbedded in the top and covered with a zinc slide, a place for a slate in the back of the preceding seat.

The seats should range in height from 17 to 9 inches, and be 20 long with a slope the same as the desks. The back of each desk should slant 2½ inches to every foot.

The side aisles should be 2 feet in width, and those between the seats 16 inches.

The stove should be placed between the partition and the seats, for which there should be a space of five feet, extending the whole width of the house. A partition occupying 6 inches, divides the school room from the entries, which are 6 by 8 feet square, the space between them being designed for wood. The middle door affords access to the wood room.

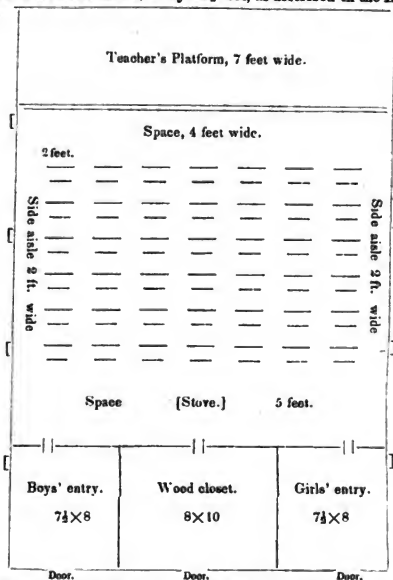
The height of the room should be, in a room designed for 40 scholars or less, 12 feet; in one of larger dimensions 14 or 15 feet. This will give to each scholar some 200 cubic feet of air. Reasons for this unusual height, will be given in the appendix, under the head of ventilation, and the committee ask that all parents will give these reasons their earnest attention. The lives and health of children are too precious to be sacrificed for the want of that pure element which God has given so bountifully to man.

The windows should be 4 on a side, viz. 6 in the school room and 2 in the entries, the bottom of each to be 3 feet and 4 inches from the floor, each window to contain 24 lights of 8 by 10 glass and made to drop and raise.

In the centre of the room there should be a square opening into the attic, closed with a slide. This, with a window in each end of the attic, which can be opened if necessary, will serve for the purpose of ventilation.

The above, the committee regard as the best plan of a school-house for the number of scholars specified. If a larger number of scholars are to be accommodated, it may be done by adding 2½ feet to the length for every additional row of seats needed, or 3 feet 4 inches to the width, the platform, spaces, entries and aisles remaining the same. Or if a less number than 40 are to be provided for, the house may be diminished in length 2½ feet for every row of seats diminished.

Plan of a School House, 26 by 38½ feet, as described in the Report.



But seldom, if ever, should the proportion of the entries, platform, and spaces or aisles be altered. The desks, whatever be their number, should range in height from 29 to 31 inches, and the seats from 17 to 19 inches, &c., and the height of the room should be from 12 to 14 or 15 feet. This may seem to many parents an immoderate height, but they may be assured that it is essential to the health of their children. A pure atmosphere is essential to health, and in no way can such an atmosphere be secured without a large space to contain it. To change the air as often as necessary in a low room, in winter, by opening the door or windows, would cost more in a short time by way of fuel, than would the proper construction of the house at first, while such currents of cold air would endanger the health of children.

There may be those, however, who may think that room, and consequently expense, may be saved by placing two scholars on a seat, nor would the committee strenuously oppose such an arrangement, though they judge the one recommended to be preferable. In case this arrangement should be decided upon, the building, to accommodate 40 scholars, should be 37 by 21 feet, exclusive of the walls. Then instead of 7 rows of single seats, there should be four rows of double ones. If a less number than 40 scholars were to be accommodated, say 32, it would be necessary only to diminish the length of the house 2½ feet and make it 34½ by 21 feet, each row of seats occupying the space

of 2½ feet in width, and with the aisle 5½ feet in length.

The ordinary expense of a school house of the above description, designed for forty scholars, is estimated at about \$400.

In conclusion, the committee would urge upon parents' attention, this matter of school-houses, as one in which they are deeply interested, and as one which calls for the exercise of candid and liberal views. The preservation of the lives and health of your children, and the training of them for usefulness and happiness is the object of a large share of your solicitude and your efforts. For them you expend freely your strength and treasure. In your children are garnered up your dearest earthly hopes. When they grow up to intelligence, virtue, and usefulness, your hearts are cheered and you feel that you have not lived and labored in vain; if they become ungrateful, vicious, worthless, your right arm is broken and your hearts are smitten with a sorrow which nothing earthly can heal. In forming the habits of the young, the common school exerts a powerful influence. Each child is expected to spend ten years or more of its life in the school room. How different, other things being equal, must be the condition of a child who spends this important period of life in a neat, quiet, comfortable room, where all the associations are suited to aid him to control and concentrate his thoughts, and with an atmosphere such as God designed for the human

lunge, from one who is doomed to a dirty, noisy, uncomfortable room, the aspect of which instead of alluring, repels him, and makes him anxious to be out of it, and the atmosphere of which, instead of being such as nature demands, is fraught with disease and death! We will not, however, enlarge on this point, but will cherish the hope that parents, when this subject is properly presented, will provide attractive, comfortable, and healthful places in which to educate their children. We are aware that suitable houses will not of themselves educate properly the rising generation,—there needs to be the right kind of instructors also; but we believe that ordinarily the districts which are careful to have the right kind of school-houses, will also be careful to obtain the right kind of teachers. If they do not grudge the expense of the one, neither will they that of the other. And when the right school-houses are procured, they should be preserved, free from every thing which will blunt the natural sensibilities or deprave the mind. In this respect the school-house should be watched over with the same care as the house of public worship. No respectable society would suffer the doors or walls or seats of their church to be marked or carved with grotesque and indelicate figures; no decent parent would suffer such things to be done to his own dwelling, and why should not the school-house be preserved as free from offence to delicacy as the church or the private dwelling.

The committee are happy to find that much has been published in other States, by gentlemen who have given careful attention to the subject, going to confirm in general, the views here expressed. Some of these thoughts may be found in the appendix to this report, and it is hoped that more of the same character will be given to the public through the Journal.

N. WILLIAMS, *Chairman.*

APPENDIX.

LOCATION—STYLE—CONSTRUCTION. The location should be dry, quiet, pleasant, and in every respect healthy. To secure these points and avoid the evils which must inevitably result from a low and damp, or a bleak and unsheltered site, noisy and dirty thoroughfares, or the vicinity of places of idle and dissipated resort, it will sometimes be necessary to select a location a little removed from the territorial center of the district. If possible, it should overlook a delightful country, present a choice of sunshine and shade, of trees and flowers, and be sheltered from the prevailing winds of winter by a hill-top, or a barrier of evergreens. As many of the pleasant influences of nature as possible should be gathered in and around that spot, where the earliest, most lasting, and most controlling associations of a child's mind are formed.

In the city or populous village, a rear lot, with access from two or more streets, should be preferred, not only on the ground of economy, but because the convenience and safety of the children in going to and from school, the quiet of the school-room, and the advantage of a more spacious and retired play-ground will be secured.

In the country, it will sometimes be desirable for two or more districts to unite and erect a school-house

at some point, to which all the older children can go from all parts of the associated districts, while the younger attend school in their several districts. In this way the school-houses can be more appropriately fitted up, and the advantage of a more perfect classification in respect both to instruction and government, as well as a wiser economy in the employment of teachers be gained.

The style of the exterior should exhibit good architectural proportion, and be calculated to inspire children and the community generally with respect for the object to which it is devoted. It should bear a favorable comparison, in respect to attractiveness, convenience and durability, with other public edifices, instead of standing in repulsive and disgraceful contrast with them. Every school-house should be a temple, consecrated in prayer to the physical, intellectual, and moral culture of every child in the community, and be associated in every heart with the earliest and strongest impressions of truth, justice, patriotism, and religion.

The school-house should be constructed throughout in a workman-like manner. No public edifice more deserves, or will better repay, the skill, labor, and expense, which may be necessary to attain this object; for here the health, tastes, manners, minds, and morals of each successive generation of children will be, in a great measure, determined for time and eternity.

SIXTH. In determining the size of a school-house, due regard must be had to the following particulars:

FIRST. A separate entry, or lobby, for each sex, furnished with scraper, mat, hooks or shelves, sink, basin and towels. A separate entry thus furnished, will prevent much confusion, rudeness, and impropriety, and promote the health, refinement, and orderly habits of children.

SECOND. A room, or rooms, large enough to allow, 1st, each occupant a suitable quantity of pure air, i. e. at least 150 cubic feet; 2d, to go to and from his seat without disturbing any one else; 3d, to sit comfortably in his seat, and engage in his various studies with unrestricted freedom of motion; and, 4th, to enable the teacher to approach each scholar in his seat, pass conveniently to any part of the room, supervise the whole school, and conduct the readings and recitation of the several classes properly arranged.

LIGHT. The arrangements for light should be such as to admit an abundance to every part of the room, and prevent the inconvenience and danger of any excess, glare, or reflection, or of cross-light. A dome, or sky-light, or windows set high, admit and distribute the light most steadily and equally, and with the least interruption from shadows. Light from the north is less variable, but imparts less of cheerfulness and warmth than from other directions. Windows should be inserted only on two sides of the room, at least three and a half or four feet from the floor, and should be higher and larger, and fewer in number than is now common. There should be no windows directly back of the teacher, or on the side towards which the scholars face, unless the light is modified by curtains or by ground glass. Every window should be suspended with weights, and furnished with

blinds and curtains; and if in a much frequented street, the lower sash should be glazed with ground glass.

VENTILATION. The atmosphere which surrounds our earth to the height of forty-five miles, and in which we live, and move, and have our being, is composed mainly of two ingredients, oxygen and nitrogen with a slight admixture of carbonic acid. The first is called the vital principle, the breath of life, because by forming and purifying the blood it alone sustains life, and supports combustion. But to sustain these processes, there is a constant consumption of this ingredient going on, and, as will be seen by the facts in the case, the formation and accumulation of another ingredient, carbonic acid, which is deadly hostile to animal life and combustion. This gas is sometimes found in wells, and will there extinguish a lighted candle if lowered into it, (and which should always be lowered into a well before any person ventures down) and is not an uncommon cause of death in such places. It is almost always present in deep mines and at the bottom of caverns. Near Naples there is one of this description, called the Grotto del Cane, or the Grotto of the Dog, because the guides who accompany strangers to the interesting spots in the vicinity of Naples, usually take a dog along with them to show the effects of this gas upon animal life. Being heavier than common air it flows along the bottom of the cavern, and although it does not reach as high as the mouth or nostrils of a grown man, no sooner does a dog venture into it, than the animal is seized with convulsions, gasps and would die if not dragged out of it into the pure air. When recovered, the dog shows no more disposition to return to the cavern, though called by his own name, than some children do to go to places called school-houses, where experiments almost as cruel are daily and hourly tried. But this gas, bad as it is in reference to animal life and fire, is the essential agent by which our earth is clothed with the beauty of vegetation, foliage, and flowers, and in their growth and development, helps to create or rather manufacture the oxygen, which every breathing creature and burning fire must consume. The problem to be solved is how shall we least mar the beautiful arrangement of Providence, and appropriate to our own use as little as possible of that, which though death to us, is the breath and the life blood of vegetation.

The air which we breathe, if pure, when taken into the mouth and nostrils, is composed in every one hundred parts, of 21 oxygen, 78 nitrogen, and 1 of carbonic acid. After traversing the innumerable cells into which the lungs are divided and subdivided, and these coming into close contact with the blood, these proportions are essentially changed, and when breathed out, the same quantity of air contains 8 per cent. less of oxygen, and 8 per cent. more of carbonic acid. If in this condition (without being renewed,) it is breathed again, it is deprived of another quantity of oxygen, and loaded with the same amount of carbonic acid. Each successive act of breathing reduces in this way, and in this proportion, the vital principle of the air, and increases in the same proportion that which destroys life. But in the mean time what has

been going on in the lungs with regard to the blood? This fluid after traversing the whole frame, from the heart to the extremities, parting all along with its heat, and ministering its nourishing particles to the growth and preservation of the body, returns to the heart changed in color, deprived somewhat of its vitality, and loaded with impurities. In this condition, for the purpose of renewing its color, its vitality and its purity, it makes the circuit of the lungs, where by means of innumerable little vessels, inclosing like a delicate net work each individual air cell, every one of its finest particles comes into close contact with the air which has been breathed. If this air has its due proportion of oxygen, the color of the blood changes from a dark purple to a bright scarlet; its vital warmth is restored, and its impurities, by the union of the oxygen of the air with the carbon of blood, of which these impurities are made up, are thrown off in the form of carbonic acid. Thus vitalized and purified, it enters the heart to be sent out again through the system on its errand of life and beneficence, to build up and repair the solid frame work of the body, give tone and vigor to its muscles and restoring all its nerves to vibrate in unison with the glorious sights and thrilling sounds of nature, and the still sad music of humanity.

But in case the air with which the blood comes in contact, through the thin membranes that constitute the cells of the lungs, does not contain its due proportion of oxygen, viz. 20 or 21 per cent, as when it has once been breathed, then the blood returns to the heart unendued with newness of life, and loaded with carbon and other impurities which unfit it for the purposes of nourishment, the repair, and maintenance of the vigorous actions of all the parts, and especially of the brain, and spinal column, the great fountains of nervous power. If this process is long continued, even though the air be but slightly deteriorated, the effects will be evident in the languid and feeble action of the muscles, the sunken eye, the squalid hue of the skin, the unnatural irritability of the nervous system, a disinclination to all mental and bodily exertion, and a tendency to stupor, headache, and fainting. If the air is very impure, i. e. has but little or no oxygen and much carbonic acid, then the imperfect and poisoned blood will not act with a peculiar and malignant energy on the whole system, and especially on the brain, and convulsions, apoplexy, and death must ensue.

The Black Hole is a prison in Calcutta, 18 feet square, into which the Nabob of Bengal after the capture of Fort William from the British in 1756, thrust 146 English prisoners. The only opening to the air, except the door, was by two windows on the same side, strongly barred with iron. Immediately on the closing of the door a profuse perspiration burst out on every prisoner. In less than an hour their thirst became intolerable, and their breathing difficult. The cry was universal and incessant for air and water, but the former could only come in through the grated windows, and the latter, when supplied by the guards without, only aggravated their distress. All struggled to get near the windows, and in this death-struggle as it were, many were trampled under foot. In less than three hours several had died, and nearly all the

rest were delicious and prayed for death in any form. On the opening of the doors at six o'clock in the morning, less than eleven hours after it was closed, death had indeed come to the relief of 133 out of the 146, and the remainder had sunk down on their dead bodies sick with a putrid fever. Now what did all this anguish, and these murderous results spring from? From breathing over and over again air which had become vitiated and poisonous by passing repeatedly through the lungs, and by exhalations from the surface of the bodies of the persons confined there. "This terrible example," says Dr. Combe in his *Principles of Physiology*, "ought not to be lost upon us, and if results so appalling arise from the extreme corruption of the air, results, less obvious and sudden, but no less certain, may be expected from every lesser degree of impurity."

"In our school-rooms," says Dr. Bell, "churches, hospitals and places of public evening amusements, and even in our private dormitories, we not unfrequently make near approaches to the summary poisoning process of the Black Hole at Calcutta. We do not appreciate the magnitude of the evils produced by breathing frequently, even for a short period at any one time, a vitiated atmosphere, because the ultimate results are both remote, and the accumulation of repeated exposures. Besides, the immediate effects may be not only slight, but may apparently disappear on our breathing again a free and pure air, so that we forget to appreciate the temporary inconvenience or suffering, and to refer them to their true cause. How often do we retire at night, perfectly well, and rise up in the morning unfreshed with sleep, with an aching head, a feverish skin, and a sick stomach, without reflecting that these symptoms of a diseased system are the necessary effects of breathing the atmosphere of a chamber, narrow in its dimensions, closed against any fresh supply from without, and not unlikely, made still more close by a curtained bed, and exhausted of even its small quantity of oxygen, by a burning fire or lamp? These same causes, a little longer in operation, or a little more active, would produce death as surely, although not as suddenly, as a pan of ignited charcoal in the room. Who has not noticed that the fainting and sickness which so often visit persons, and especially females of delicate health in crowded churches and lecture-rooms, only occurs after the air has become overheated and vitiated, by having been a long time breathed, and that an exposure to the open air generally restores the irregular or suspended circulation of the blood? In the relief and newness of life which we experience on emerging from such places of crowded resort, we forget that the weariness and languor, both of mind and body which we suffered within, were mainly the depressing effects of the imperfectly vitalized blood, and that the relief is simply the renovated life and vigor, which the same blood, purified of its carbon by coming in contact with the oxygen of the air, imparts to the whole system, and especially to the brain. But in spite of our forgetfulness of the cause, or the apparent disappearance of the temporary inconvenience and distress, which should warn us to beware of a repetition of the same offence against the laws of comfort and health,

repeated exposures are sure to induce or develop any tendency to disease, especially of a pulmonary or nervous character, in our constitutions, and to undermine slowly the firmest health.

In the school-room the same poisoning process goes on day after day, and if the work is less summary, it is in the end more extensively fatal, than in the Black Hole of Calcutta. Every man and woman, who received any portion of their education in the common school, can testify to the narrow dimensions, and low ceiling of the school-rooms, and to the discomfort arising from the close, stagnant offensive atmosphere, which they were obliged to breathe. Who does not remember the comparative freshness and vigor of mind and body with which the morning's study and recitations were begun, and the languor and weariness of body, the confusion of mind, the dry skin, the flushed cheek, the aching head, the sickening sensations, the unnatural demand for drink, the thousand excuses to get out of doors, which came along in succession as the day advanced, and especially in a winter's afternoon, when the overheated and unrefreshed atmosphere had become obvious to every sense? These were nature's signals of distress, and who can forget the delicious sensations with which her holy breath, when admitted on the occasional opening of the door, would visit the brow and face, and be felt all along the revitalized blood, or the newness of life with which nerve, muscle, and mind were endued by free exercise in the open air at the recess, and at the close of the school? Let any one who is sceptical on this point visit the school of his own district, where his own children perhaps are condemned to a shorter allowance of pure air than the criminals of the State, and he cannot fail to see in the pale and wearied countenances of the pupils, the languor and uneasiness manifested, especially by the younger children, and exhaustion and irritability of the teacher, a demonstration that the atmosphere of the room is no longer such as the comfort, health and cheerful labor of both teacher and pupils require.

In this way the seeds of disease are sown broadcast among the young.

There is a mischievous error prevailing, that if a room is kept at a low temperature there is no need of ventilation. Dr. Alcott mentions the case of a teacher, who when asked if she did not find it difficult to keep her room ventilated, replied, "not at all, it is one of the coldest rooms in the city." The necessity of ventilation arises from the consumption of the oxygen and the generation and accumulation of carbonic acid principally in breathing, and both of these processes can go on and do go on, in a cold room, as well as in a warm one, if human beings are collected in it, and goes on rapidly and fatally according to the number of persons and the size and closeness of the apartment.

TEMPERATURE. The temperature of the room should be uniform, and of the proper degree in every part. Not a child should be exposed to sudden and extreme changes of temperature, or compelled when overheated, or at any time, to sit against an inlet of cold air, or with cold feet. This last is a violation of an indispensable condition of health. To secure a

uniform temperature, a thermometer will not only be convenient, but necessary. It cannot be ascertained, for different parts of a room or for thirty or forty persons, differently circumstanced as to heat or cold, or differently employed, some of whom are seated, some standing or changing their position from time to time, without some less variable and uncertain standard than the teacher's feelings. However anxious he may be to make every scholar comfortable, he cannot be conscious at all times of the differing circumstances in which they are placed. He is not exposed to the rush of cold air from a broken or loose window, or from cracks in the ceiling, or the floor. He is not roasted by a seat 'toun near the stove. He is not liable to a stagnation of the blood in the feet from want of exercise or an inconvenient bench. Even though he were capable of thus sympathizing with them, the temperature of the room after the fire is thoroughly going, and the doors closed, may pass gradually from 65° to 90° without the change becoming perceptible. Now though we may breathe freely in such an atmosphere, gradually heated, we cannot pass into the open air 40° or 50° colder, as would be the case on most winter days, and much less receive a current of such air on a portion, and a sensitive portion of the body, without great danger. With a thermometer in the room, the beginning and progress of such a change would be indicated, and could be guarded against.

SEATS AND DESKS FOR SCHOLARS. The seat should be made, as far as possible, like a convenient chair.

The desk for a single scholar should be, at least, two feet long (two and a half is better) by eighteen inches wide, with a shelf beneath for books, and an opening in the backside to receive a slate. The upper surface of the desk, except three or four inches of the most distant portion, should slope one inch in a foot. On the level portion, along the line of the slope there should be a groove to prevent pens and pencils from rolling off, and an opening to receive an inkstand. The top of the inkstand should be on a level with the desk, and be covered by a metallic lid. The end pieces or supporters of the desk should be so made as to interfere as little as possible with sweeping.

If the desk is made to accommodate two scholars on one seat, a partition, extending from the floor for four or five inches above the surface of the desk, should separate them, and if possible they should belong to different classes, so that one will be in his seat, while the other is at recitation.

If school-houses are to consist of but one room for all the children, regard must be had to the varying circumstances of the winter and summer school. In the former, the larger and older children predominate, and in the latter, the younger and smaller, and yet in both, the younger and smaller are sadly neglected, not only in matters of instruction, but in physical comfort. In summer, they, or at least, a portion of them, are seated "beyond soundings," on seats intended and occupied by the older scholars in winter; and in winter, they are packed away on smooth, high, backless slabs, and in a roasting proximity to the fire. Now there is no way of remedying

this state of things, but by having a school-room large enough to accommodate all who may attend, and to have seats and appropriate desks for all the children, be they young or old, large or small. In the winter, let so many of the seats and desks for the smaller children as are not wanted be removed to the attic, or the wood-room, and their places supplied by some for the older, and in the summer let this arrangement be reversed.

YARD AND EXTERNAL ARRANGEMENTS. The external arrangement of a school-house, as connected with its attractiveness and convenience, and the health, manners, morals, love of study and proficiency of the pupils, must not be overlooked.

The building should not only be located on a dry, healthy and pleasant site, but be surrounded by a yard, of never less than half an acre, protected by a neat and substantial inclosure. This yard should be large enough in front, for all to occupy in common for recreation and sport, and planted with oaks, elms, maples, and other shady trees, tastefully arranged in groups, and around the sides. In the rear of the building, it should be divided by a high and close fence, and one portion, appropriately fitted up, should be assigned exclusively for the use of the boys, and the other, for the girls. Over this entire arrangement, the most perfect neatness, seclusion, order and propriety should be enforced, and every thing calculated to defile the mind, or wound the delicacy or the modesty of the most sensitive, should receive attention in private, and be made a matter of parental advice and co-operation.

An appropriate place for fuel should be provided, which, it may be well to remark, should be supplied of the right quality, in proper quantity, in due season, and in the right condition for being used.

Every school-house should have its own well, with suitable arrangements for drink, and for the cleanliness of the pupils.

A bell is always found an essential help in securing punctual attendance, and determining when the time of recess begins and ends.

Report on School Houses.

The length of the Report on School Houses, furnished by the Windsor County Committee, compels us to defer several articles intended for this paper. Information in regard to School houses has been called for from several quarters, and the Report will doubtless be particularly welcome. The communications referred to, including the continuation of series already commenced, and which we defer with reluctance, may be expected in our next.

OF GOVERNMENT. The association of Beavers presents us with a model of Republicanism.

The Bees live under a monarchy.

The Indian Antelopes furnish an example of patriarchal government.

Elephants exhibit an aristocracy of elders.

Wild horses are said to elect their leader.

And Sheep, in a wild state, are under the control of a military chief ram.

A VALUED RELIC. In his remarks at the dedication of the Dana Hill School House in Cambridge last week, George Livermore, Esq. said he had had in his possession, within a week, an old worn school book, bearing the name of the boy who used it more than a century ago. It was not larger than "Colburn's Arithmetic," nor half as good looking a book, yet an offer of \$50 had been refused for it, and \$100 could not buy it. It was George Washington's grammar.—*Transcript, 7th.*

Think of that, boys! This is the way to turn all that you touch into gold—to be good for something yourself.

The Beaver is an *Architect, Builder and Wood Cutter*. He cuts down the trees, and builds houses and dams.

The Marmot is a civil engineer. He not only builds houses, but constructs aqueducts and drains to keep them dry.

Wasps are paper manufacturers.

For the School Journal.

The School Law.

It is well understood, that while a large majority of the people of this State regard the present system for the improvement of our Common Schools with favor, there are some who are honestly opposed to it, and regard it as imposing an unnecessary and useless expense upon the community. The objections to the system, however, do not prevail so extensively as when it was first adopted; and there is reason to believe that they would be altogether removed if the design and operation of the law was fully understood. It is true, some expense attends it, in common with every thing else which is valuable; but the question is, does not the community derive benefits which are far more than an equivalent? If so, the people are the gainers, as clearly as the man who buys a horse for fifty dollars which is worth one hundred. Let us look at the subject fairly and candidly, and if the law is defective let it be repealed or remodeled; but if its operation is producing good, all honest men will doubtless unite in supporting it, whatever may have been their previous views.

It must be admitted by all that we must have schools. No one, whether a parent or not, will be prepared to give them up entirely, and the expense of sustaining them must be defrayed, whatever their character. If good, they will be expensive, and if poor, not less so; for almost invariably a poor thing brings more in proportion to its worth than a good thing. A poor cow will sell for \$20, while a good one, which will yield twice as much for the dairy and cost no more to keep her, will not bring over \$30, when it is obvious that she would be cheaper at \$40, than the poor one at \$20. The object of our schools is also fully understood. They are designed to afford a good education to all our children, and it will be admitted that all classes should unite their efforts to secure this object. No parent at all regarding the welfare of his children, no citizen desirous of the public good, but will at once admit that our schools should

be of a character to secure a thorough education for our youth.

If the expense then must be borne, we ought by all means to see that the object is secured in the most full and perfect manner. Before the present system was adopted, not one in a hundred of those who defrayed the expense of our schools ever visited them, or made any inquiries in regard to the qualifications of the teachers. The teacher was hired at the lowest possible price, and was expected to remain six hours daily in the school room, and to hear his scholars read, spell and recite. At the end of the term he received the stipulated wages, and no questions were asked whether he was qualified to instruct, or whether he ever attempted it. Now it is evident that such a school might be of no benefit at all to the district. If the teacher was not qualified to *instruct*, he might, it is true, *hear* the reading and recitations, but what would be the benefit? The pupils might as well pursue their studies at home, reading and reciting their lessons to each other or to their mothers, and thus save the whole expense of the school. Under such circumstances the cost of the school is a total loss to the district and the money absolutely thrown away.

The present system is designed, first, to secure teachers who are qualified not only to hear the exercises, (which any one can do who has ears,) but also to give instruction—to teach their pupils something more than simply what they can learn alone from their text books. This is done through the examination of the teachers by the superintendents. Let any one attend these exercises, and he will be satisfied of the benefits resulting from them. The teacher is subjected to a thorough examination in all the branches to be taught in his school, during which such suggestions are thrown out by the superintendent, in regard to the best method of conducting the school and imparting instruction, as his experience and qualifications will enable him to do, and which may assist the teacher to be more useful in discharging his duties in the school. The knowledge that they are to be subjected to such a trial, operates as a stimulus upon the teachers to prepare for it, and as a natural consequence, as a class they are far better qualified for the business of instruction than they were before the system was adopted, and each succeeding year witnesses a farther improvement.

In the next place, the present plan is designed to secure a more faithful and efficient discharge of his duties on the part of the teacher. No prudent farmer or manufacturer, would hire a hand and set him at work alone, without daily inspecting his operations, and satisfying himself in regard to his capacity and faithfulness. If we are thus watchful in our business affairs, should we not with equal care, see that the education of our children is properly and faithfully attended to, by those whom we employ for that purpose? If parents would visit the schools and look to this matter personally, that would be sufficient; but as they do not, (for "what is every body's business is no body's,") the law provides that the superintendents shall visit the schools from time to time, and inspect the labors of the teachers and see that they are faithful.

Again, the present system is designed to collect information in regard to the best books—the best plans for imparting instruction, &c., and to communicate this information to the teachers and to the public. This is an age of improvements. There are improvements in agriculture, in manufactures, in commerce, in government, and not less so in the systems of education, and these improvements are constantly progressing towards perfection. Those who are not disposed to fall in with them, must be content to see the rest of the world advancing and reaping the benefits they afford, while they themselves will receive the reward of their folly in the loss of these advantages. Other States and countries are making improvements in their plans of education, and many of the best minds in the nation and the world, are employed in perfecting these plans, so that the youth of all classes may receive the greatest possible benefits from the schools. Our State and County Superintendents are laboring to collect information in regard to such improvements, and to communicate it to the teachers and to the people; and it is very clear that if they devote their time and attention to this subject for weeks and months every year, they become far better qualified to judge what plans it will be desirable to adopt, than those who only occasionally bestow a thought on the subject; just as a farmer can judge better than the merchant what crop his soil is best adapted to,—or as the blacksmith can judge better than the lawyer, what temper should be put in an edged tool.

In their several departments, therefore, the officers under the present school law, are laboring to advance the cause of education, and judging from the improvements in our schools for the last two years, they are laboring successfully. There has been an evident and gratifying progress. Our teachers are better qualified,—they are far more interested in having good schools, and in seeing their pupils make advancement in their studies,—their plans of teaching are improved so that the children will accomplish more in the same time; and on the whole it may be fairly estimated that the improvement in the character and condition of the schools for the last two years has been fully equivalent to 20 or 25 per cent. The whole expense of the schools in the State has been estimated at \$200,000, and an improvement equal to 20 or 25 per cent. would be, therefore, a saving of \$40,000 or \$50,000 a year; and if the expense of the present system of supervision is not over a fifth part, (and probably it is not a tenth part,) of the amount saved, it is evident that on the whole, the State is a gainer by the outlay, and instead of the system being a useless expense, it is in fact an exercise of the truest economy.

Other States have adopted plans for the improvement of their schools, somewhat similar to our own, under the operation of which the children are becoming every year better and better instructed; and this will undoubtedly be the result under our own system if faithfully carried out according to the spirit of the law. It is not contended, however, that our system is perfect, or that it cannot be improved; and improvements will doubtless, from time to time be made; but whatever its imperfections, it is evidently doing a

great benefit to the cause of education in the State; and it is, therefore, the duty of all good citizens, and the privilege of every parent to exert their influence in all suitable ways for sustaining this law and carrying out its provisions.

J. F. F.

POWER OF FIGURES. Set any given line of figures so that they can be reversed, and one subtracted from the other, as for an example:

756321

123657

632664

Now you may strike out any one of the figures in the last line, and by giving the remaining figures as they would then read, a person can tell the figure you have stricken out, without knowing what the sum was you set down to subtract from, by the following process:—

The remainder, as above, is 632664; 2 being stricken out would leave 63664, which added together makes 25. Now divide this by 9:—

9)25(2

18

7

The remainder being 7, is to be subtracted from the figure 9—leaves 2—the figure stricken out.

MICHAEL ANGELO. A friend called on Michael Angelo, who was finishing a statue. Some time afterwards he called again; the sculptor was still at his work. His friend, looking at the figure, exclaimed: "You have been idle since I saw you last." "By no means," replied the sculptor, "I have retouched this part, and polished that; I have softened this feature, and brought out this muscle; I have given more expression to this lip, and more energy to this limb." "Well, well," said his friend, "but all these are trifles." "It may be so," replied Angelo, "but recollect that trifles make perfection, and that perfection is no trifle."

Mathematical Questions.

Solution of the Question in the July No.

120—70=50=sum before adding the 70.

50÷3=16⅔=⅔ sum after the sum was added.

16⅔×4=66⅔=whole do.

66⅔—50=16⅔=sum after ⅔ was taken.

16⅔÷2=8⅔=⅔ original sum.

8⅔×3=25, answer.

MARTHA.

"A. B. C.," and "STUDENT," have furnished answers; but none of them answer the inquiry in regard to the principle involved. The latter sends the following

Question.

From the apex of an isosceles triangle, the two equal sides of which are each 12 rods in length, and the other 9, I wish to cut ⅔ of an acre by a line parallel with the base. How far from the base must it be drawn?

STUDENT.

Craftsbury, July 22.

THE AGRICULTURIST.

Notes from the Horticulturist.

JULY, 1848.

The Editor gives the vicinity of Boston credit for the best Horticulture in the United States.

The pollen of flowers has been found in some cases to retain its fertilizing power for some weeks, and even a year. This enables the cultivator to obtain a cross between such as do not bloom at the same time, or to carry the pollen to any distance. The stamens are gathered just before the anther cells are ready to burst,—wrapped in writing paper, and kept in a dry room. The pollen they emit is then collected and kept in sheet lead, or between two concave glasses.

A cultivator in Delaware finds that, he can raise a fine crop of gooseberries by covering the ground with sea weed, or salted hay,—the object being to protect them from the dry heat of our climate. Salted straw, we suppose, would do as well. The straw should be six inches deep, or more.

The Editor gives a figure of the *Red Diaper* Plum, which he recommends as ranking with the *Green Gage*, and *Jefferson*.

For the black wart on plum trees, a correspondent recommends cutting out and the use of copperas water—an ounce of copperas to two gallons of water. He states (and the Editor assents) that the white and yellow kinds are not so liable to this disease as the dark colored.

A Maryland subscriber lays a covering of straw under his dwarf pear trees, and finds them decidedly more healthy and vigorous in consequence. He supposes it to be a protection against the blight, and that it prolongs the life of the tree. The covering is kept on through the year, and renewed every spring. He winds a rope of straw round the trunk, to protect it from heat and sudden changes.

The *Northern Spy* Apple, sent from Rochester the first of June, the Editor pronounces unequalled for the season except by the *Newton Pippin*. Of the two, the former is more tender and sprightly but not so rich; "the most beautiful and sprightly of spring apples." Sold in Boston this spring at \$3 to \$4 per barrel, and the finest specimens retailed at 12½ cents each!

Negotiations are in progress for holding a national Pomological Convention in New York in October.

The Editor calls *Downer's Late*, all things considered, the best of cherries, and the *Jefferson* the finest of plums. The most productive plums on light soil, the *Lombard*, *Cruger's Scarlet*, *Smith's Orleans*, *White Dawson*.

Of Strawberries the Editor says, "The large English *Scarlet* produces more regular crops than any variety known." "Trench your ground 2½ feet deep, put it in good condition, and you will find no difficulty in procuring abundant crops."

A PROFITABLE SPEECH. A correspondent of the *Farmer's Cabinet*, says that after hearing an excellent speech from Dr. DARLINGTON, before the Philadel-

phia Agricultural Society, on the proper use and care of implements, he was induced to make such useful repairs, provide a tool-house, and keep his implements in so much better order than before, that "he calculates his savings in wear of tools, since the delivery of that speech, has not been less than \$50 per annum; while the time gained by having everything in its place, was worth as much more"—adding \$100 a year to his income.

Subsoiling Light Lands.

Some farmers in our vicinity with whom we have conversed think that the subsoil plow cannot be of much use with us, especially in cultivating our lighter soils. The following statements made by Gov. Hill in the *Monthly Visitor* for June deserve their consideration. His experience is strongly in favor of subsoiling the lightest soils. We do not know whether subsoiling has been tried on such lands in Vermont.

"The forwarding the growth of our light lands by the stimulents contained in our muck composts (by no means of the richest materials) twice and thrice in as many successive seasons, applied with a mixture this year of 200 lbs. each of African guano and ground plaster—aided by the deep subsoil ploughing once only, done when the ground is broken up—is certainly all we could wish. We have twenty-two acres, (fifteen of potatoes, six of corn and one of marrow squashes) planted in our own mode of manuring and cultivation, which now promise better, for the time and season, than any crops of the kind we have before cultivated. Four acres of early potatoes, planted about the 25th of April, on light pine plains land, last fall broken up and subsoiled, we will present on a challenge with any other four acres in the county of Merrimack: they are now (June 26) nearly budding for the blow. We can almost warrant this subsoiled pine-plain crop of potatoes to be free from the rot. And we are not without hope that our later planted potatoes on subsoiled intervals sward, manured with compost guano and plaster, may likewise escape the contagion.

Our oats, sown on light, but previously well manured land, about the first of May, do not yet show as our oats did last year in a heavier clay soil—they are not what we expected them to be. We have yet possibly to learn that oats are not the right crop for a sandy river soil, where some other crops (as on this ground last year marrow squashes and Indian corn) might yield well.

The grass on twelve acres of our subsoiled intervals (the sorrel and weeds nearly expelled) presents at this writing a most luxuriant and exhilarating aspect; these acres will give what hay might satisfy the desire of the most over-reaching farmer who was obliged to mow it with the strength of his own arms."

Notice, by the way, the crops which Gov. Hill cultivates. The acre of marrow squashes are for the Boston market; as are probably the early potatoes. The difference of freight between Concord and White River is not so great as to affect materially the value of a crop of either.

For the Vermont Agriculturist.

The Ox-eyed Daisy.

The chrysanthemum leucanthemum, or ox-eyed daisy, that nuisance to the farmer, is evidently spreading rapidly through Vermont. Can you, or any of your correspondents, point out a practical method of rooting it out of our fields? Will the grass run it out, if the land is sufficiently enriched? Or can it be destroyed by nothing but the hand or the hoe?

We find the following answer in the Cultivator:—

WHITE DAISY, OR "WHITE WEED." (*Chrysanthemum leucanthemum*.) J. B. Watertown, N. Y. Where there are but few plants of this kind, it is best to dig them up root and branch. If meadows are overrun with them, prevent their seeding by mowing as soon as the blossoms appear. In tillage land, kill them as soon as you would any other bad weed, and if they are very numerous, it is advisable to keep the ground in hoed crops for two or three years, during which if due attention is paid, they may be nearly exterminated. At all events prevent their seeding, as it is from seed only they are propagated. If mowed green and well cured they make hay that is not disliked by cattle and horses. If they ripen, the seed falls to the earth and vegetates, or goes with the hay to the barn or stack, gets into the manure and is returned to the land. It is in this careless way that the pest is continually renewed and increased. Top-dressing meadows with manure that contains no foul seed, and in every way encouraging the growth of grasses and white clover, will, with the above precaution drive out the daisy in a few years.

From the Horticulturist.

Profits of Fruit Growing—No. 2.

When so many farmers are complaining of small profits, we think it proper to say a little more on the profits of fruit growing.

CHARLES DUBOIS, of Fishkill landing, Dutchess county, N. Y., has taken thirty-three dollars for the fruit grown on one Frost Gage Plum Tree in one season; and last season received ninety dollars for the crop of apricots from one tree.

A lady of Kensington, Pa., has received seventy dollars in a season from one apricot tree.

Agardener, near Boston, has produced eight thousand quarts of strawberries to the acre, and received twenty cents per quart for them,—thus realizing sixteen hundred dollars per acre.

An acre of raspberries on Long Island has produced nine hundred dollars worth of fruit in a season. The expense of cultivating, picking the fruit, and taking it to market was one hundred and fifty-seven dollars,—leaving a handsome nett profit of seven hundred and forty three dollars; a larger sum than thousands of farmers realise from a farm of an hundred acres.

Mr. ZIEBER of Reading, Pa., has made forty-two gallons of pure grape juice wine from one Isabella vine in a season, worth, when one year old, one dollar and fifty cents per gallon—or sixty-three dollars; being the interest on one thousand and fifty dollars.

An apple orchard of one acre, principally of Rhode

Island Greening, in Wayne county, N. Y., produced two hundred barrels of fruit in '47. Another orchard, of three and one-half acres, produced six hundred and fifty barrels. Although the fruit was sold at extremely low prices—being so far in the interior of New-York—yet the nett proceeds were one hundred dollars per acre. In the vicinity of Philadelphia, such a crop of fruit would have paid a nett profit of three hundred dollars per acre.

JOHN G. GARDNER of Nantucket, Mass., has produced the cultivated cranberry three hundred and twenty bushels to the acre, and found ready sale at four dollars per bushel; thus realising twelve hundred and eight dollars per acre.

Many persons will say—"Well, large profits may be obtained on a small scale, but nothing can be done on a large scale."

We happen, just now, to think of some large operations in fruit culture. Major REYNOLD, of Delaware, together with his sons-in-law, own a number of farms, and have about a thousand acres in peach orchards. They think nothing of sending five thousand baskets of peaches to market per day, for some weeks, and are supposed to have realised, last season, forty thousand dollars clear of all expenses.

ROBERT L. PELL of Pelham, Ulster county, N. Y., is known to have raised, for several years past, four thousand barrels of Newtown Pippin Apples per year; and what he chooses to sell in New-York city, will always command six dollars per barrel. Those he sends to London have sometimes sold [at retail] as high as twenty-one dollars per barrel. Last season Mr. PELL's crop was ten thousand barrels.* Suppose, for argument's sake, that one-third of this amount is swallowed up in expenses, there is still left the handsome sum of forty thousand dollars.

DR. R. T. UNDERHILL, of New-York, has a vineyard of twenty acres of Isabella and Catawba grape vines at Croton Point, on the Hudson river. It is a well known fact, that some thousands of baskets of grapes, from this vineyard, are annually sent to New-York, and find ready sale at nine dollars per hundred pounds.

The doctor says there ought to be started a hundred vineyards immediately as large as his; and we coincide with him. New-York city, with Brooklyn and Williamsburg, is half as large as Paris; and in this latter city, ten million pounds of table grapes are consumed yearly.

You will, I think, be surprised to hear that many wealthy farmers, near Philadelphia, buy their apples yearly,—this year, at one dollar per bushel; and this too, when they acknowledge that feeding cattle and raising grain does not pay more than three per cent. on the capital invested in farming. Some of them mean well; they have intended to plant out trees every year for the last twenty years! B. G. BOSWELL.

Philadelphia, Feb. 14, 1848.

[*We know the apple crop at the Pelham farm, last season, was an enormously large one; but we presume our correspondent's estimate of that crop is only an estimate, and not precisely ascertained amount. We endeavored to obtain an exact account of the product of this really great orchard for 1847, but without success.—EDITOR.]

Proper Stage of Cutting Wheat.

It may be interesting to notice with attention some of the experiments which have been made in cutting wheat at different times. In the 12th and 13th volumes of the Scottish Quarterly Journal of Agriculture, Mr. HANNAM has given the details of several very particular and careful trials made under his own direction. In one instance he cut samples of wheat at five different times, as follows :

No. 1,	was cut a month before fully ripe.
" 2,	" three weeks " "
" 3,	" two " " "
" 4,	" two days " "
" 5,	" when fully ripe.

Of these lots, 100 pounds of the grain of each yielded as follows :

No.	Flour.	Seconds.	Bran.
1	75 lbs.	7 lbs.	17 lbs.
2	76	7	16
3	80	5	13
4	77	7	14
5	75	11	15

Thus it appears that No. 3, which was cut two weeks before it was fully ripe, was superior to the other lots; giving more per bushel than No. 5, (cut when fully ripe) by 6½ pounds of flour, and a gain of about 15 per cent. on the flour of equal measure of grain; 100 pounds of wheat of No. 3, makes 80 pounds of flour, while 100 pounds of No. 5, yields 79; showing an average of 8 per cent. in favor of No. 3. In grinding, it was found that No. 5 ground the worst—worse than No. 1. There were in No. 5 a greater quantity of flinty particles, which would not pass the belt than in any of the other lots. The bran from No. 5 was also much thicker and heavier than that of No. 3.

Mr. HANNAM concludes, that in cutting wheat two weeks before it is fully ripe, there is a gain of fifteen per cent. of flour upon equal measures, a gain of 14 per cent in the weight of straw, and a gain of 7s. 6d. sterling in the value of every quarter (560 lbs.) of wheat.—*Cultivator*.

THE FRUIT MARKET. The apple crop in the United States is likely to be abundant this year. On the other hand a letter in the N. Y. Courier and Enquirer, dated at London, June 16, says:—

"The apple and pear orchards of England are failures for this year at least, and many of the trees are so injured, that they will die altogether. It therefore behooves the farmers of the States to take much care of those fruits, and to thin their crops, that the apples which may arrive at maturity, shall all be the best of their kind, and in good condition. The fruit-trade here is a very large one. So much so, that many persons devote their attendance exclusively to a single fruit; as for instance in the cherry orchards of Kent; and in this instance the cherry is of a singular kind, (the Kentish cherry) and that a sour, thin, poor cherry, only fit for pies, and never introduced into desserts. By the laws of England, all preserves from foreign countries, into which sugar is introduced, pay a very heavy tax—six pence per pound. Is there not some

speculating ingenious Yankee, who has the desire to lay the foundation of a fortune for himself and his family, by introducing American apples in some mode by which they can be preserved for table use in England, during the winter, without the use of sugar! The dried apples—both whole and in slices, (duty two shillings and sixpence per cwt.) are brought from the Continent; and as they are introduced year after year, one can only suppose that the importation of them must be lucrative. It will, however, be requisite to avoid the great fault of all Jonathan's exports; a practical belief that quantity not quality is the one thing requisite; and that if he sends a mass from his wharves it will be sufficient—regardless alike of the condition in which it may arrive, and of the probability of its pleasing the eye of the purchaser. The dried apples from the continent arrive in beautiful and clean baskets of wicker work, containing from six to ten pounds; each apple chosen for its soundness, and the whole of them assorted in sizes and ranged in rows, with all the neatness of a spinster's work box."

HAYING. The last summer, I tried a few haycups, and found them to work first-rate. I used them to cover grain, both loose and in bundles, putting some fifty bundles under one cap by making a sort of stack of them.

These caps have paid for themselves the first season. They not only keep the hay dry, but save a great deal of time and labor, which in haying time is precious. Mine were made with four yards of cloth with a little stick on each corner, eighteen inches long, to fasten them down with. They were not oiled or painted. The cost of the cloth was seven and a half cents per yard, which made six dollars for my twenty, and I have lost that amount on what they will cover in one storm.—*Plow Jigger*.

BUTTER MAKING. Lord Clarendon recommends the following mode of making butter:—Put as much milk as cream in the churn. This, he says, improves the color of the butter. Put as much hot water around the churn as will raise the temperature of the whole to 62° or 63° F. This will always insure the butter to come in from 30 to 30 minutes, which will be of better quality than if it were longer or shorter in churning.

TWO CROPS OF APPLES THE SAME YEAR. We received yesterday, from Mr. J. L. Kintner, of Harrison county, Ia., a sample of delicious early apple. He gives it no name, says that it originated in Harrison county, grew on trees from four to seven feet high, and that the trees bear a second crop in the fall, of which he says he will also send us a sample. The apple is of good size, fine form, of exceeding beauty, and very delicious. The color of most of the apples sent us, is all over a bright cherry-red, but some are green, with a broad red cheek. We regard it as eminently worthy of cultivation, and request Mr. Kintner to forward us a quantity of grafts next winter, that we may propagate some of the trees for the nursery market.—*Louisville Journal*.

Butter Dairies.

The following statement of Mr. B. A. Hall, of New Lebanon, N. Y., was made to B. P. Johnson, Esq., of the New York State Agricultural Society, and submitted to the committee on butter dairies, who unanimously recommended the first premium of \$50 to be awarded to Mr. H., and his statement to be published in the Annual Transactions of the Society.

"B. P. JOHNSON, Esq. Sir: In making a statement respecting my dairy, and farming operations connected with it, I will glance at the causes that contributed to lessen the number of pounds produced. They consist in the small quantity of snow that lay upon the earth during the last severe winter, and the late backward spring of 1847. Sward of meadows, of pastures being constantly exposed to such intense frosts, and thin coats of ice, they have produced much less than an average quantity of herbage. The consequence of which is, so far as I am informed, much diminished quantities of butter and cheese. In the operations of butter making, the season past, I have made some experiments, to ascertain the exact degree of temperature, necessary to produce the *very best* butter. Previous to trying the experiments, I became satisfied that one great cause of bad butter, was the high degree of temperature, at which cream was frequently kept and churned. I applied the thermometer, and churned the cream at different degrees, varying from 55° to 66°, and found I invariably obtained the best butter when the temperature was below 60°, say 55°. The great anxiety of dairymen to churn quick, is at the expense of a first-rate article. Any person, at all conversant with butter making, has observed the whitish yellow color and oily appearance it will present when taken from the churn, whenever the cream has been, or is too warm when the operation of churning commences, thus forever destroying its rich flavor and keeping properties. The buttermilk cannot be expelled without working too much, which makes it sticky and oily. On the contrary, cream taken from the milk at a proper time, kept and churned at 57° or 56°, will require more time in churning, but the butter will present a high and rich color—will be firm and hard—will not stick, and will readily break when being separated. The buttermilk can be at once expelled, which should always be done before the salt is applied, so that when it is subsequently worked, which should be very little, nothing will be expelled but a little brine, slightly discolored. Another cause of bad butter is the use of impure salt, and that frequently in such large quantities, that lumps not dissolved are frequently found in it. A small quantity only should be used of pure rock salt, perfectly pulverized and incorporated with the butter. No other salt should be used but such as is perfectly pure. The Salina salt, after repeated trials, I have entirely thrown aside.

I have also tried experiments to ascertain what effects different kinds of feed had on the quality and quantity of butter produced from any given quantity of milk. From 1,500 pounds of milk, weighed when feeding green cornstalks in addition to feed obtained in the pastures, I obtained a little over one-half of one

pound, from each 100 pounds of milk, more than the average produced through the season, and the butter made was of superior quality. For a description of my farm, locality, &c., I respectfully refer the committee to Transactions for 1846, page 144, which contains my statement made that year. I have used in addition to the farm there described, about 20 acres of hill pasture and 8 acres of meadow, soil gravel loam, bearing red and white clover and herds grass. An average crop of hay on my meadows, that are not ploughed, is about one and three-quarters ton per acre. My dairy has been composed the past season of 20 cows, from 4 to 13 years old; 5 three years old heifers and 4 two years old, all of native breed, except 3 short horn heifers: one of my cows became dry about the 15th of September, and I sold one cow and one heifer a little later. I think a fair average through the season would be 27 cows. I had 26 calves dropped by the 16th of April. They were all kept on the cows until the 12th of May, when they were all sent to the Boston market, when I immediately commenced making butter, and continued 224 days.

The produce of my dairy was a follows,
viz:—3,736 lbs. of butter, sold in the Boston market by C. P. Adams, at an average nett price of 24½ cts., \$ 1,067 13
29 calves, averaging 37 days old, 151 83
Cream and milk used in a family of 12 persons, 16 cents per day, 58 30
Skimmed milk and buttermilk fed to hogs, 224 days, \$ 1 40 per day, 316 40
\$ 1,593 66

My cows each gave on an average, as weighed and measured, 4,230 pounds of milk, which would make for the whole herd, 164,200 pounds. The quantity of butter to 100 pounds of milk, would be a fraction less than 3 pounds 5 ounces. The feed of my cows, in addition to grass and hay, was two quarts of provender (barley and oats) per day, during the time they suckled their calves, and one feeding per day of green corn or pumpkins from about the first of August to the first of November, after which they were fed on dry corn fodder.

For a particular account of my method of making butter, I will again take the liberty of referring the committee to my statement of last year, which has not been varied, except in the use of more ice, and a little lower degree of temperature, which, together with the use of green corn for feed, has improved the quality of the butter.

My sales of young pigs, which were fed on the skimmed milk and buttermilk about two months, and then sent to market,

Amounted to,	\$0,236 65
Pork, lard, &c.,	1,640 39
<hr/>	
Nett amount of sales,	\$ 1,677 04
Amount paid for hogs,	842 00
<hr/>	

Amount to credit for feed,	\$ 1,035 04
----------------------------	-------------

I have not yet hauled out their manure, but I think I can safely estimate it at 450 loads."

Professor Mape's Experimental Farm.

NEW-YORK, JUNE 28, 1848.

The Value of Science in Agriculture. Science is gradually making its way to the farm-house and lending its powerful and important aid to agricultural pursuits. As an incentive to others to "go and do likewise," I will state very briefly what a practical chemist is now doing in this vicinity in experimental farming. Professor MAPES, for some years past a resident in this city, and well-known as a good chemist and scientific man, concluded last fall to turn his attention to agriculture. For this purpose he purchased a small farm of about forty acres in New Jersey, between two and three miles northwest of Newark. He is now in the midst of his first season, and yesterday I went out to his place in company with some of the members of the American Institute to see what sort of a start he had made in his new pursuit. The result was highly gratifying, and left the impression that this little experimental farm will help to give a valuable stimulus to the agriculture of the country. The basis of his soil is principally disintegrated sandstone with a mixture of clay. The farm had been occupied for some years past by a mechanic, who had paid but little attention to it, and it was in a low state of cultivation, thus making it a fair field to test the results of chemical farming.

On our arrival we were seated a while in the professor's snug parlor, where he gave us a general account of the farm, the nature of the soil, the sources and mode of procuring, preparing, and applying manures, and their influence upon vegetation. In short it was an admirable chemical lecture applied to agriculture. He then took us over the farm to see what he had done and what he was preparing to do. At the barn we found two yoke of the handsomest and most powerful working oxen I have ever seen.

"Where did you ever find such cattle?"

"I called a man to my aid who was a first-rate judge of animals and told him to go out and look for them directing him to bring me two pairs of the best oxen he could find between New York and Bangor, regardless of the expense."

The result was that he brought back these cattle at about two hundred dollars a yoke, "and cheap enough at that," said the Professor. One pair weighed about 3,800 pounds. We then went into the field to see them plough, and the ease with which they took the plough through the soil seemed more like the work of a powerful steam engine than animal power. The first yoke cut a furrow sixteen inches in depth. The next yoke followed with the sub-soil plough in the same furrow, cutting and loosening the earth sixteen inches below the first furrow. The Professor says deep ploughing is very important for large crops. Some of his ploughing is thirty-six inches deep. His system of preparing and applying manures is scientific and important, and, judging from present appearances, he will produce remarkable results. The science of a succession of crops in the same season, without impoverishing the soil is of vast importance. The Professor says that from a single acre he shall take off this season eight hundred

bushels of potatoes, three thousand five hundred cabbages, and six hundred bushels of turnips; which must be worth five or six hundred dollars at the lowest market prices. His crop of cabbages this season he calculates at eighty thousand heads. He has a new variety of potato, which he calls the nutmeg potato, of which he expects to raise this season eighteen hundred bushels, which will be disposed of for seed at one dollar a bushel. He calculates that he will have a hundred and twenty thousand nutmeg melons for market this season, which certainly ought to average two cents a piece, and at that price, they would yield twenty-four hundred dollars. There is on the farm a great variety of other vegetables and crops to which I make no reference.

Unlike most farmers, he does not leave a strip of waste land along by the side of his fences, but cultivates every inch enug to the fence. Against each post in the fence he sets out a fruit tree, and midway between the post a grape-vine, which, as it runs and spreads, will rest on the fence. In this way he will soon have three miles of grape-vine and fruit trees on ground which ordinary farmers would let run to waste. He uses his farm like a great machine of wonderful powers, it properly and scientifically handled. He employs upon it about twenty hands, but says in a high state of cultivation it would give employment to eighty.

Goldsmith says, in that sweet poem, the "Deserted Village"—

"A time there was, ere England's griefs began,
When every rood of ground maintained its man."

But I think Professor MAPES is in a fair way of proving that in this country a rood of ground may be made to maintain quite a number of men; and I hope he will do much to convince our farmers that scientific farming is of more importance to them that great numbers of acres.—*Nat. Intel.*

Animal Physiology.

An English periodical, in noticing Richardson's work on swine, lately published, gives a quotation in reference to the "points of a good pig," in which it is stated that the breast should be broad, as denoting "good room for the play of the lungs, and a consequent free and healthy circulation essential to the thriving or fattening of any animal."

This, though a point upon which practical men are generally agreed, is contrary to the theory of some physiologists, viz: that animals, to fatten readily, should have *small lungs*. Prof. Playfair, assumed, that if two pigs were taken, one of which had lungs of twice the size of the other, the one with the smallest lungs would make twice as much fat for the food consumed, as the one with the largest lungs.

So far as the observations of the writer have extended, this theory does not appear to be supported by facts. To obtain positive results, however, it is obvious that a series of close and thorough examinations and trials with various animals would be necessary. At the same time it may be useful to give such facts as come within our reach.

In our April number, we noticed some fat animals

which had been lately slaughtered in this city. We saw most of these animals before they were killed, and particularly noticed their forms and outward points generally. We also saw several of them dressed, and had the opportunity of examining their internal organs. Of the cattle, the most remarkable were the heifer, fattened by Mr. McKnown, the twin oxen from Mr. Bassett, and the calf from Mr. Woolford. These were of extraordinary fitness, and it may be remarked that when an animal is fattened to so great a degree, the lungs become compressed by the accumulation of internal fat, and are, therefore, of less bulk than when the beast was in a more natural condition.

We took particular notes in regard to the appearances of those animals, but not having room at present for the details we will simply state, that in every case the heart and lungs corresponded to the external dimensions of the chest; and the qualities of early maturity and fatness, were in proportion to the size of these organs; in other words, the fattest animals were those which had naturally the largest chests and largest heart and lungs.—*Albany Cultivator*.

Lime.

By burning and slaking, the lime is reduced to the state of impalpable powder, finer than could be obtained by any available method of crushing. It can in consequence be diffused more uniformly through the soil, and hence a smaller quantity will produce an equal effect. This minute state of division also promotes in a wonderful degree the chemical action of the lime. In all cases chemical action takes place between exceedingly minute particles of matter, and among solid substance the more rapidly, the finer the powder to which they can be reduced.

The effect of burned lime is more powerful and more immediate than that of unburned lime in the form of chalk, oyster shells or marl. Hence it sooner neutralizes the acids which exist in the soil, and sooner causes the decomposition of vegetable matter of every kind to commence, upon which its efficacy, in a greater degree depends.

Further, quick-lime is soluble in water, and hence every shower that falls and sinks into the soil carries with it a portion of lime so long as any of it remains in the caustic state. It thus reaches acid matters that lie beneath the surface, and alters and ameliorates even the subsoil itself.

In the analysis of the ashes of wheat it is found to contain 37 per cent. of lime; oats 26, barley 16, rye 21, potatoes 66, red clover 38.

Among the elements which enter into the composition of soil, lime would seem one of the most useful. From the above, it would appear that potatoes take from the soil nearly twice as much lime as either article named. In order therefore to raise a good crop of potatoes, it is necessary that the soil should be replenished with lime. It is evident that in the course of time, and constant cropping, especially with the before mentioned articles, lime would be constantly consumed, therefore it requires replenishing.

Quick lime in its pure state, whether in powder or dissolved by water is injurious to plants. Grass is

killed by watering it with lime water. But lime in its state of combination with carbonic acid, is a useful ingredient in soils. Lime is found in the ashes of the greater number of plants.—*American J. of Ag. and Science*.

From the Ohio Cultivator.

"Mocho Hogs."

"A breed of hogs known by the above name, is noticed by some of our exchanges. It is stated that they attain their growth in six months, and may be fattened to weigh 200 to 250 pounds without difficulty. Their bodies are of unusual length, with very short legs, bearing them scarcely six inches above the ground. They are symmetrically formed, are of quiet disposition, and make pork of excellent flavor."

The foregoing paragraph was cut from a Cincinnati paper and handed to us by a friend who inquired for further information respecting the breed of hogs referred to.

We have seen no mention of this breed except in the "Pararie Farmer" of some time last winter, and the number of the paper containing the first notice has been lost or mislaid. The following communication taken from the April number of that work corrects an error in the above notice.

MESSENGER EDITORS: I wish to correct a trifling mistake or two made by yourself in the February number of the Farmer in reference to the Mocho hogs. The article stated that the pigs attain their growth at 6 months, and then may be fattened to weigh 200 or 250 pounds. The fact is, they usually attain their growth at 7 or 8 months, and when well kept will at that age weigh from 200 to 250 pounds, and I think may easily be made to come up to 300 at nine months. They require but one half the keeping that common breeds do, not to say any thing of the land pikes, one of which would starve on the feed that would fatten two of these fit for market. I have one at present that it would be difficult to improve in beauty of form. She is borne up scarcely three inches from the ground by her short legs, and is estimated to weigh at the age of six months 200 to 250 pounds. No man can obtain a correct idea of the animal unless he sees it: and any judicious pork raiser would soon part with all other kinds for the Mocho. The greatest trouble is to keep them from fattening too fast. Ours will keep fat on four or five ears of corn per day at the age of 8 months, and is good pork, and always has been fit for the knife.

SILAS STEPHENS.

Half Day, March, 1848.

Honey Bees.

Certain persons in this country, are making money by producing artificial swarms of bees at one dollar for each swarm produced. They attempt to veil the subject in mystery.

Was the process a discovery of any of these persons, we would say go ahead gentlemen—do what you can and make what you can by your discovery and genius. But it is not so. It is a species of "Book Farming," which they have learned from Books, and therefore it is not—should not—and shall

not be used as a recent valuable discovery if we can make the matter understood.

Artificial Swarming, consists, merely in taking a piece of comb containing young bees *about three days old*—fixing this comb in a clean hive and then collecting by means of a quill or brush and saucer, at least one-half of the bees belonging to the hive from which the comb was taken and placing them in the hive containing the newly cut comb. This is all that is necessary to produce a good active swarm of bees, which will do as well at least as those left behind, some pretend that a particular kind of comb should and must be taken for this purpose, for instance, comb containing royal cells. It is a mere pretence; any comb containing bees of the above mentioned will do.

ANOTHER PROCESS. Take the Queen Bee, and secure her—then drive more than half the Bees in the hive into another hive—remove it some distance and then put the Queen in, or if less than half are taken, remove the old hive to some other place and let the new one occupy the place of the old one, so that the absent workers, as they may return from their labors may recognize their old queen and remain with her.—*Morgan Chronicle*.

Kyanizing Wood.

The process of preserving wood and fabrics composed of vegetable fibre, is likely to become very serviceable, and is already very extensively employed in Great Britain. Its efficacy in preserving timber from the dry rot, had been amply demonstrated in the various experiments made in the ship yards of England. Wood and various vegetable fabrics, which had undergone the preparatory process, had been exposed for years, to the influence of moisture and bad air, without sustaining any apparent injury, while the like materials, not submitted to the process, suffered rapid decay and destruction. The process of Kyanizing, as it is now termed, consists in immersing the wood or cloth, for a few hours or days, in a mixture of water and corrosive sublimate, in the proportion of one pound of the latter to five gallons of water. The mercury combines with the albumen of the vegetable matter, its most perishable part, and renders it insoluble, in the same manner that tan renders the gelatinous matter in hides so. Wood, or linen or hempen fabrics, which are to be exposed to the weather, particularly in humid situations, or in the earth, may, by this process, be preserved for a great length of time.—*Am. Jour. of Agriculture and Science*.

USES OF SOAP SUDS. At Towne's Hotel, in Warren, Trumbull county, we saw an Isabella grape vine, said to be but three years old, planted under the kitchen window, which had climbed to the second story, a good way towards the ridge pole, and extending its branches around the corners of the building to a distance not less than twenty or thirty feet, and from within four or six feet of the ground to the extreme branch was full of clusters of fruit. We were assured that the only extra advantage it had was watering it well, nearly every day, with dishwa-

ter, and occasionally soap-suds. The following is from one of our exchange papers:

SOAP SUDS. The finest peach and apricot trees that we have ever seen, received a weekly or monthly wash of soap suds, after the clothes of the family had been duly cleansed. A bucket full to a tree, taking them in rotation, answers a capital purpose to destroy the eggs of insects and supply potash where it is much needed. Never waste in a sewer, or about the kitchen, a fertilizer so valuable as soap-suds.—*Ohio Cultivator*.

DEVONSHIRE BUTTER. Scald your cream, in a zinc pan, over a charcoal fire; but do not let it boil.

When the cream is cold, say the next morning, take it off with the hand. Put the cream into a wide wooden bowl; stir it with the hand for ten or fifteen minutes; and the butter will be the same as out of a churn, and to be dealt with the same. A cow that will make one pound of butter per day, that is seven pounds per week, if the cream is scalded, it will make nine pounds in seven days. Great care must be taken not to let any dust rest upon the cream.—*Gardener's Chronicle*.

GOOD vs. POOR COWS. "If," says a late author, "we estimate the cost of keeping a cow at twenty-five dollars, we shall find that it a cow gives six quarts of milk a day, the loss in keeping her will be \$4 75. If the yield per day be eight quarts, then the profit will be about \$5. If the milk is ten quarts a day, the profit will be \$11 75.

The Markets.

BRIGHTON MARKET—THURSDAY, JULY 27.

At market, 375 Beef Cattle, (including 250 left Monday) 100 Stores, 2700 Sheep and 510 Swine.

PRICES—Beef Cattle.—We quote extra, 6; first quality, 5 25 a 5 75; second quality, 5 50 a 5 50; third, 4 75 a 5.

Stores—Very few sales.

Cows and Calves—Sales \$19, 23, 27, 30, and 38.

Sheep—Dull. Sales small lots at \$1 50, 1 70, 1 88, 2 25, and 2 75.

Swine—Small pigs to peddle 54, 54 and 6c.; old Hogs 5 and 54c. At retail 54 a 74c.—*Advertiser*.

FANEUIL HALL MARKET.

WHOLESALE.					
Beef, fresh, lb.	7 a	15	Apples, barrel,	3 50 a	4 00
Mutton, 1st qual.	6 a	8	do. dried, lb.	5 a	6
2d "	5 a	7	Beans, bush,	1 50 a	1 75
Lamb,	8 a	10	Pears, bushel,	1 00 a	1 25
Veal, lb.,	7 a	9	Potatoes, barrel,		
Pigs, roasting,	1 00 a	1 25	New,	2 50 a	3 00
Chickens, pair,	75 a	1 25	Common,	2 75 a	3 00
Turkeys,	1 25 a	1 50	SEED—RETAIL.		
Geese, mongrel,	1 25 a	1 50	Clover, North. lb.	10 a	12
Pigeons, dozen,	75 a	1 00	Southern,	8 a	9
Pork, per 100lb.	6 00 a	7 00	White Dutch,		25
Lard, best, pr. 100	9 00 a	10 00	Lucerne, or French,		33
Western, keg,	8 00 a	8 50	Herdgrass, bush	3 25 a	3 50
Butter, lump, lb.	20 a	23	Red Top, bushel,		
do. skrin,	15 a	18	Northern,	1 25 a	
Cheese, new milk,	7 a	9	Southern,	65 a	88
do. four meal,	5 a	6	Orchard Grass,		2 50
Eggs, doz.	— a	15	Fowl Meadow,	2 80 a	

CHERRIES. The crop of cherries this season has been very light and the quality poor. Many blighted in the spring, and those that set and grew have been much injured by wet weather. Some cultivators, who would have had 50 or 60 bushels in a good season, have had only a few bushels fit for the market. Some large trees full of fine looking fruit just before the season of ripening, have wholly failed.

The great loss from the tenderness of cherries in wet weather, should induce cultivators of fruit to pay more attention to hardy kinds. The Downer is the most hardy of any kind. The Honey Heart is nearly as hardy. The Black Eagle is tolerably hardy. The Black Tartarian, Black Heart, and Hyde's Seedling hold a middle rank as to hardiness. The Bigarreau is the most tender of all. The White Bigarreau and Napoleon Bigarreau are tender. The Flesh-colored Bigarreau is more hardy, and the most profitable of this class, being large, handsome, and excellent.

Munning's Late Black is among the hardy kind. Mr. Ives, who owns the original tree, informs us that he got more good fruit from this tree this season than from all his other kinds.—*Boston Cultivator.*

Domestic Economy.

TO PRESERVE BEEFSTEAKS.

"We have often found it a difficult matter to preserve beefsteaks sweet and tender for any length of time after procuring in market, as the ordinary method of salting it is sure, more or less to harden it and to render it less palatable. Speaking of this matter not long since, to a lady friend of ours, she remarked that she had heard it said, that beef well enveloped in corn meal, would keep a considerable length of time without salt. We, on hearing this, determined at some convenient time to try the experiment. So, on Saturday morning, 15th ult., we purchased a fine piece of steak, and after cutting it into pieces of the weight of two or three pounds, instead of applying salt, each piece was completely enveloped in corn meal, and packed away with a sufficient quantity of meal between the pieces to prevent their coming in contact with each other. In this condition it was prepared for the table. On Thursday morning following, being the sixth day after it was slaughtered, the last of it was served up, and was pronounced by those who partook of it, to be in every respect more delicious than it was the day we procured it. We state the above simple facts for the information of those who may not already be informed as to what is here stated, knowing at the same time that one simple fact is worth a dozen theories."—*Anderson (S. C.) Gazette.*

Possibly some reader may find the above worth a quarter of a dollar in the treatment of a single piece of beef.

MAKING PRESERVES. *Currants.* Strip them from the stems. Allow a pound of sugar to a pound of currants. Boil them together ten minutes. Take them from the syrup, and let the syrup boil twenty minutes, and pour it on the fruit. Put them in small

jars or tumblers, and let them stand in the sun a few days.

Currant Jelly. Pick over the currants with care. Put them in a stone jar, and set it into a kettle of boiling water. Let it boil till the fruit is very soft. Strain it through a sieve. Then run the juice through a jelly bag. Put a pound of sugar to a pint of juice, and boil it together five minutes. Set it in the sun a few days.

Blackberry Jam. Allow three quarters of a pound of brown sugar to a pound of fruit. Boil the fruit half an hour, then add the sugar, and boil all together ten minutes.

Raspberry Jam. No. 1. Allow a pound of sugar to a pound of fruit. Press them with a spoon, in an earthen dish. Add the sugar, and boil all together fifteen minutes.

Raspberry Jam. No. 2. Allow a pound of sugar to a pound of fruit. Boil the fruit half an hour, or till the seeds are soft. Strain one quarter of the fruit, and throw away the seeds. Add the sugar, and boil the whole ten minutes. A little currant juice gives it a pleasant flavor, and when that is used, an equal quantity of sugar must be added.—*Miss Beecher's Domestic Receipt Book.*

MOCK CREAM. Beat three eggs well; then add to them three heaping teaspoonfuls of fine flour; beat them well together; then stir them into a pint and a half of boiling milk; add to it a saltspoon of salt and loaf sugar to taste; flavor with essence of lemon, stir it while boiling; when it is perfectly smooth it is done.

Line pie or tartlet pans with rich puff paste, and bake them in a quick oven; when done, fill them with mock cream; stew powdered sugar over the top of each, and set them again into the oven to brown; when a fine color, they are done. These will be found to be altogether superior to custard pies.—*Anonymous.*

ECONOMY IN LINEN WASHING. A correspondent of a Dundee paper writes as follows;—"After many experiments made by myself and others, I find that a little pipe clay dissolved among the water employed in washing, gives the dirtiest linens the appearance of having been bleached, and cleans them thoroughly with about half the labour, and a saving of full one-fourth the soap. The method adopted was to dissolve a little of the pipe clay in the warm water in the wash tub, or to rub a little of it, together with the soap on the articles to be washed. This process was repeated as often as required, until the articles to be washed were made thoroughly clean. All who have made the experiment have agreed that the saving of soap and labor are great; and that the clothes are improved in colour equally as if they were bleached. The peculiar advantage of employing this article with the soap is, that it gives the hardest water almost the softness of rain water."

Vials which have been used for medicine, should be put into cold ashes and water, boiled and suffered to cool before they are rinsed.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. II.

WINDSOR, VT., SEPTEMBER, 1848.

No. 5.

THE SCHOOL JOURNAL.

For the School Journal.

American Dictionaries.

No. II.

In my last number I noticed Dr. Webster's great work, the complete, unabridged edition of his Dictionary, and endeavored to convey as clear an idea of its contents to those who had not had the privilege of examining it, as the brief space allowable by your limits would permit. I now propose to introduce your readers to the octavo edition of the same publication, the title whereof is as follows :

An American Dictionary of the English Language: exhibiting the Origin, Orthography, Pronunciation, and Definitions of Words. By NOAH WEBSTER, LL. D. Abridged from the quarto edition of the Author. To which are added, a Synopsis of Words differently pronounced by different Orthoepists; and Walker's Key to the Classical Pronunciation of Greek, Latin, and Scripture Proper Names. Revised and enlarged by CHAUNCEY A. GOODRICH, Professor in Yale College. With the addition of a Vocabulary of Modern Geographical Names, with their Pronunciation.

The main object, undoubtedly, of the present edition, is to provide a book better suited for the million than the quarto, both as it respects bulk and price, without very materially abridging its contents. In form it is a large and thick octavo, and it contains *all the words* in the larger work. The necessary compression and diminution of price has been attained partly by collecting the definitions for each word into a single paragraph, instead of devoting a separate one to each shade of meaning; but principally by giving both definitions and derivations in a somewhat contracted form, and omitting the elucidative quotations. To enable your readers to form a more correct judgment of the relative usefulness of the works, I annex two of the articles. Each can thus ascertain which volume will best suit his peculiar taste and habits.

QUARTO. LATITUDE, *n.* [Fr. from *L. latitudo*, breadth; *latus*, broad; *W. llyd*, breadth.]

1. Breadth; width; extent from side to side.

Wolton.

2. Room; space.

Locke.

[In the foregoing senses, little used.]

3. In *astronomy*, the distance of a heavenly body from the ecliptic.

4. In *geography*, the distance of any place on the

globe, north or south of the equator. Boston is situated in the forty-third degree of north latitude.

5. Extent of meaning or construction; indefinite acceptance. The words will not bear this *latitude* of construction.

6. Extent of deviation from a settled point; freedom from rules or limits; laxity.

In human actions, there are no degrees and precise natural limits described, but a *latitude* is indulged.

Taylor.

7. Extent.

I pretend not to treat of them in their full *latitude*.

Locke.

OCTAVO. LATITUDE, *n.* [Fr.; *L. latitudo*.] 1. Breadth; width; extent from side to side; [*rare*.] 2. Room; space; [*rare*.] 3. In *astronomy*, the distance of a heavenly body from the ecliptic. 4. In *geography*, the distance of any place on the globe, north or south of the equator. 5. Extent of meaning and construction; indefinite acceptance. 6. Extent of deviation from a settled point; freedom from rules or limits; laxity. 7. Extent.—Locke.

QUARTO. LAZY, *a.* [G. *lass*, *lassig*; W. *llesg*.—The Fr. *loche* is from *L. laxus*, and it is doubtful whether this is of the same family.]

1. Disinclined to action or exertion; naturally or habitually slothful; sluggish; indolent; averse to labor; heavy in motion.

Wicked men will ever live like rogues, and not fall to work, but be *lazy* and spend victuals.

Bacon.

2. Slow, moving slowly, or apparently with labor; as a *lazy* stream.

The night-owl's *lazy* flight.

Shaks.

OCTAVO. LAZY, *a.* [G. *lass*, *lassig*.] 1. Disinclined to action or exertion; naturally or habitually averse to labor; heavy in motion. 2. Moving slowly or apparently with labor.—SYN. slothful; sluggish; slow; dilatory; indolent; idle; inactive.

In the octavo, the life of the Author, and the Introductory Dissertation on the Languages of Western Asia and Europe, are necessarily omitted. But a new feature has been introduced in this edition, which will be found of exceeding value to the young student, and indeed to most classes of readers. I allude to the arrangement of SYNONYMS under the leading words, of which a specimen will be found above under the article LAZY. The book contains in all 1289 pages, and is afforded at the exceedingly moderate price of three dollars and a half.

In the next number, the two smaller editions of Dr. Webster's work will be noticed.

Proposed alteration in the School Law.

When the late changes in our School system were made, the method of raising district funds for the support of schools was left unaltered. It is found to operate unequally, in many instances unfavorably. It is supposed by many gentlemen who have taken a deep interest in the progress of common education, that it would be decidedly better to have the system uniform, and that all the funds shall be provided by tax upon the Grand List,—a plan which has long been followed in many places, and which seems to be most in accordance with the spirit of our institutions and with the design of our common school system.

The subject was considered at the State Educational Convention, where the following Memorial was drawn up and signed. Among the signatures the reader will notice the names of individuals entitled to the most respectful attention when they speak upon such a subject.

Would it not be well, for the friends of education in all parts of the State who entertain like views on this subject, to prepare and forward similar memorials?

MEMORIAL.

TO THE LEGISLATURE OF THE STATE OF VERMONT:

We the undersigned citizens of the State of Vermont respectfully suggest, that both the *policy* and the *genius* of our government require an alteration in the existing statute law of this State in relation to the raising of taxes for the support of Common Schools.

We hold that the education of our children and youth is a subject *universal* in the benefits that it bestows, and the whole Commonwealth have a common and abiding interest in the matter. A healthy and correct intellectual culture is as necessary to the *moral*, as a pure and invigorating atmosphere is to the *physical* condition of society.

We ask the attention of the Legislature to this subject,

1st. Because Common Schools are to be viewed as of *public*, and not of merely *private* utility.

2nd. Because the present law is a fruitful source of contention and animosity in school districts.

3rd. Because universal experience shows that while Common Schools which are supported by a tax upon the grand list are well sustained and profitable,—on the other hand, schools that are supported by subscription, or a tax upon the scholar, are comparatively worthless and poorly sustained.

We therefore request the Legislature so to amend the existing law upon this subject, that all monies for the support of Common Schools shall be raised by a tax upon the grand list. In other words, while the benefits resulting from our schools are the surest guards and protection of our property, the taxes for the support of our schools, like the taxes for the support of our government, should be raised upon the property, and not upon the persons, of the district.

August 24, 1848.

J. P. Fairbanks,
J. Wheeler,
Addison Brown,

Roger S. Howard,
Darwin H. Ranney,
Joel Bass,

Harry Hale,
William Hebard,
Wm. H. Heugb,
J. S. Spaulding,
Thomas S. Hubbard,
David Dearborn,
James Udall,
Horace Ware,
Erastus Young,
L. P. Sawyer,
Isaac L. Clark,
J. Morse Flint,
J. R. Morse,
Solon Martin,
Eben'r Smith,
E. C. S. Miller,
Feleg Morey,
B. F. Ray,
C. F. Morse,
E. C. Reddington,
H. W. Tarbell,
Benjamin Porter,
Edwin Porter,
Frances E. Russell,
A. O. Hood,
L. B. Pettengill,
N. George Clark,
J. R. Herrick,
F. D. Shattock,
F. E. Clark,
A. A. Smith,
W. Dearborn,
Sam'l Keith,
John W. Smith,
N. S. Tinker,
Augustus Wing,
John Gardner Hale,
Wm. T. Herrick,
Isaac Harrington,
John Dudley,

A. Partridge,
Richard H. Little,
Frederick Moulton,
C. H. Smith,
C. G. Barnham,
Salmon Joiner,
Daniel Wyman,
William Wilson,
David Ferry,
James K. Colby,
Lewis S. Skinner,
Lewis Hill,
Phineas Kellogg, Jr.,
O. D. Allis,
B. M. Munn,
M. C. Waldo,
Isaac Paine,
Calvin Waldo,
Sidney Allen,
A. S. Allis,
J. B. Lyman,
David Fuller,
George Fuller,
William Pettegrew,
A. B. Corlis,
Matthew Hale,
W. C. Grant,
Horatio M. Perkins,
Abner B. Davis,
C. A. Leach,
N. C. Belcher,
L. Bacon,
A. E. Goodwin,
D. Henry B. Allen,
Ara A. Goodwin,
L. T. Noble,
G. H. Harvey,
E. R. Skinner,
W. A. Burnham,
William Slade.

State Educational Convention.

The State Educational Convention held at Chelsea on the 23d and 24th of August, was very well attended, and one of very unusual interest. Active friends of popular education were present from nearly all the counties in the State, and several gentlemen from abroad, distinguished as teachers and for their knowledge of the subject, took an active part in the discussions, and some of them gave valuable lectures.

We defer to our next the particulars. In accordance with the wishes of the Convention, our October number will contain as full a report of the proceedings, including the lectures and debates, as our sheet will hold—the whole number being devoted to it, to the exclusion of the Agricultural department. We can promise our readers that they will find it interesting and valuable.

The members of the Convention ordered about 2,500 extra copies on the spot. Extra copies can be furnished to any amount, at \$1.20 per 100. Orders must reach us as soon as the 20th inst.

The proceedings were of such a character that we anticipate from the publication a happy and permanent influence; and we think the friends of the cause would do well to procure copies enough at this cheap rate, to furnish an ample supply to every town and school district. This is especially desirable where the Journal is not circulated to much extent.

Some members of the Convention ordered 100 copies each for their respective towns.

Educational Papers, and Education.

The question is sometimes asked, What need is there of attempting to sustain so many papers devoted to education? It is admitted that not only the politician, but the citizen, must have a political paper; he must know who are the candidates for his suffrages, and what is said of their characters, though it must be confessed by every intelligent man that our elections are, after all, decided by the votes of those unable to read and write; since it cannot be denied that, at our last Gubernatorial election, there were at least fifteen thousand voters of this class in Ohio, and that, at the last Presidential election, there were two hundred thousand such voters in the Union. Again, the farmer must have his agricultural paper, to acquaint him with the best modes of tillage and the means of improving his stock; the artist and manufacturer, their magazines and journals; the philanthropist and the christian, their periodicals, to inform them of the progress made in the reformation and evangelization of the world; and the professional man must, at whatever cost, have a full supply of the journals and reviews pertaining to his call. But no one of these seems to consider himself bound to do anything to sustain a periodical devoted to the promotion of education in his own State and neighborhood.—Still, by pursuing the course above named, all these classes admit the doctrine, that the maintenance of periodicals devoted to the advancement of their several interests or callings, is essential to the success of their enterprises, and that the patronage of them, on their part, is a matter of interest to themselves, if not of duty to the cause to which they are devoted.

Now, if it be true that no political party, that no philanthropic or religious enterprise could expect success without the aid of the press, and that the improvements in agriculture and the arts are mainly due to its agency, can it be expected that the cause of popular education, a cause which, more than any other, depends for its success upon the enlistment of the whole community in its favor,—can it be expected that this cause will succeed without calling to its aid, and employing in its service, so important and efficient an agent as the press? If, then, it be admitted that its agency is necessary, it may be easily shown that the existence of papers and periodicals devoted, mainly, if not exclusively, to this subject, is indispensable, since there is, probably, not a single secular or religious paper in the West, in which one column, even, is regularly devoted to the cause of popular education.

But, it may be asked by some, what claims the cause of universal education has upon the attention and the sympathies of the community at large. We answer—

1. It can be proved by the best of testimony, that without that intelligence and virtue which it is the aim of the friends of this cause to secure to every youth of our land, a Republican government and our free institutions cannot be perpetuated.

2. It can be shown with equal clearness, that without general intelligence, piety cannot be expected to

prevail, since, without it, religion is ever in danger of degenerating into superstition or fanaticism.

3. It can be demonstrated that those who are respectably educated can earn for themselves, or others, from twenty-five to fifty or one hundred per cent. more than those without education, and that, too, in employments where physical labor and manual skill are mainly concerned, to say nothing of other occupations, where mental culture and a profound acquaintance with science are required.

4. It can be shown that more than one half the sickness in our country is the result of ignorance, of a want of that acquaintance with the laws of health which might easily be obtained, and that, consequently, more than half of the expense occasioned by illness and the loss of time, labor, &c., attendant upon it, might be saved if the whole community were properly educated.

5. It is well known that a large proportion of the litigation in this country arises from the inability (or the disposition occasioned by a want of facility in doing it properly) to keep a proper record of business transactions.

6. Could the statistics of intemperance be fully ascertained, it would be found that the great majority of those who have ruined themselves and beggared their families by intemperate drinking, have, by the neglect of the culture of their minds, been rendered unable to enjoy any other than sensual pleasures.

7. If proper inquiry be made, a large proportion of the paupers, sustained at public expense, will be found to belong to the ignorant class, and to have been brought to their present condition by their want of the intelligence necessary to enable any one to manage business for himself.

8. No reading man needs to be informed that nine-tenths of all the criminals confined in jails and penitentiaries are deplorably ignorant, as well in regard to science and knowledge in general, as in respect to morals and religion.

These are a few of the facts which we would urge upon the attention of those who have not yet enrolled themselves as the active friends of popular education.—*Ohio School Journal*.

KEEP THYSELF PURE.

Little child, with pleasant smile,
Let thy soul be free from guile,
Banish wicked, impure thoughts,
Pray that these may enter not—
In the chambers of the soul,
Never let them have control.
Keep thy heart, so pure and clean,
Free from every hateful sin;
Selfish tempers, envy, pride,
Naughty anger never hide
In thy thoughts, but drive away;—
Love and kindness bid to stay.
All that's good, and right, and pure,
May forevermore endure.

The bird Ploceus Textor is a weaver. He weaves a web to make his nest.

Caterpillars are silk-spinners.

For the School Journal.

Report on School Houses.

CORRECTIONS AND ADDITIONS.

MR. EDITOR: In reading the report of the Committee on School Houses, published in the last number of the Journal, a few suggestions have occurred to my mind, which, with your permission, I will lay before your readers.

1. Hon. Horace Mann is not the "State Superintendent of Common Schools in Mass.;" for no such office exists in that State. His office is that of the "Secretary of the Board of Education," which he still holds.

2. In relation to the height of the Teacher's platform across the end of the room. I have never seen one less than 12 inches. Some are more. They usually vary in height, according to the space between the ceiling and the floor. Mr. Mann says it should be "from 1 to 2 feet high." See Plate 1 in his report on School Houses. I would add, that a recitation seat should, as is usual, be placed upon the platform extending its whole length, either movable or fixed. The last is preferable. Also movable drawing seats should occupy the middle spaces between the doors, facing the wall, if the room is to be occupied wholly or in part by small scholars.

3. There is an omission to state the *width* of the seats, which are usually made so narrow, that they are hardly so comfortable to sit upon as a rail, as I can testify from sad experience. Seats in the best constructed school houses, range from 9 to 12 inches in width.

4. As a practical mechanic, I would suggest, instead of Locke Amsden's "slide," to close the ventilator, as more convenient, a trap door. The most convenient and proper size of the ventilator is from 2 to 3 feet in length, and from 18 inches to 2 feet in width. This should be closed with a door hung at one end. To the other should be attached a cord running over a couple of pulleys in the attic, and coming down near the wall on the Teacher's platform. Upon the wall should be fixed a *sailor's cleat*, so as to enable the Teacher to regulate the ventilation according to the circumstances of the case. With these additions, I see nothing I would wish to alter in the plan recommended in the report.

A PRACTICAL MECHANIC.

For the School Journal.

The School House Report.

I would inquire of the Committee who presented the plan of a school house, published in the August number of the Journal, if they did not intend to have a recitation seat.

I think I have learned from six winter's experience in teaching, that a recitation seat is an almost indispensable thing. The idea of having scholars recite in their seats, to me, is absurd; and not much less so, is that of having them sit on the stage facing the school, where their attention would naturally be led from the recitation by every passing event in the school room.

I think in a well managed school the following reg-

ulations should be attended to; and consequently that every school house should be so constructed that they may be fully carried out without disturbance in the school room.

1. All classes when reciting should be seated together, that they may better understand the answers of each other, and cause as little disturbance as possible to the rest of the school.

2. They should sit near the blackboard and facing it, that they may easily comprehend the diagrams and explanations made thereon.

3. They should be in front of, and with their backs to the other scholars, that their attention may not be drawn from their recitation by what the other scholars may be doing, and that the teacher may hear the recitation and observe the other scholars at the same time.

QUERY. Where is that place in the plan now presented to the public? S. H. L.

REMARK. The place intended by the committee for the recitation seat, we presume to be in front of the front row of desks,—where there is a space of four feet. The omission to designate that use of this space, we presume to have been accidental.

EDITORS.

For the School Journal.

Moral Education.

NO. VII.

The means of promoting moral education in the common school may be arranged under two heads, *direct* and *indirect*. Under the former may be classed the proper, effectual use of the Bible, as indicated in No. IV., and the development and cultivation of the conscience by suitable questions, as exemplified in No. V. The taste for beauty, and other miscellaneous points to be named, are of an *indirect* nature. Vocal music partakes of both qualities. The music has a tendency to soften and refine, and thus indirectly to give power to the moral sense; and when "married to immortal verse," it goes directly to the improvement of the heart and life.

TASTE FOR BEAUTY. All men who are not blind, possess this element, but it requires cultivation in early life, for otherwise in most cases it remains dormant. Through habit, men look on this glorious creation with insensibility, are less moved by the all-enlightening sun, than by a show of fireworks. It is the duty of a moral teacher to develop this sense in man, that he may learn in what a world of loveliness and magnificence he lives.

God has filled this world with the most beautiful forms, colors, proportions, and sounds, and exquisitely has he fitted man for their enjoyment. Everywhere, and at all times, are we surrounded with harmony and beauty. Is all this for no purpose whatever? Has Nature in vain been formed so divinely fair, her breath in vain been perfumed with such ethereal sweetness? Shall we obstinately shut our eyes and our ears to the enjoyments which God has so lavishly provided for our use? Shall we utterly neglect the most refined intellectual pleasures, pleasures accessible to

all, without money and without price, and refuse to consider Nature in any other light than that in which it appears to the brute, viz. as the minister to our grovelling appetites and propensities? Shall we willfully bereave ourselves of one of the surest means of enkindling and sustaining a lofty spirit of devotion, by a *real*, not merely a *nominal* admiration of the works of God? Shall we refuse to consider our stupendous mountains, our beautiful valleys, in any other light than that of furnishing pasture for sheep and oxen? our torrents and cataracts as formed only for grinding meal and whirling spinning jennies? Came we into the world for food, raiment, and shelter alone? Shall we *talk* of our souls, and *act* as if we, and all surrounding nature were nothing but gross matter? Shall we suffer ourselves to be wholly immersed in business, to become mere creatures of sense? No, no. Whatever may have been our *past* conduct, let us now put far from us such folly, such *ingratitude* to our Heavenly Father. Let us determine, at least, that our children no longer shall have eyes that see not, ears that hear not.

The taste for beauty can never be inspired too early. The teacher should endeavor to introduce the smallest of the pupils to the glories of creation, to the unbound volume of God's word, whose imperishable leaves are so widely spread abroad. Nowhere can a child move without having them on his right hand or on his left. Yet, alas! he is for the most part blind and deaf to all, and continues so through life. His heart never leaps up, like the poet's, when he "beholds a rainbow in the sky." In the wonders of vegetable life, he reads neither the power, the love, nor the unmeasured bounty of his Heavenly Father. In the voice of the singing birds, in the cooing of the dove, in the lowing of cattle, in the deep toned roar of the sea, in the thunder of the cataract, in the soft murmur of the brook, and in the low moaning of the wind, he cannot distinguish the tones of that hymn of praise, which ascends without ceasing to the throne of God. They consequently fail to produce either love or devotion. His heart, amid all these glorious sights and sounds, remains cold and inert.

Who has no inward beauty, none perceives,
Tho' all around is beautiful.

The whole creation appears through the sordid medium of self. To him, all these are property, or they are nothing. Property! They are his property, if he only knew it. Are they not the work of his Father? Are they not filled with harmony, clothed with beauty, solely for the enjoyment of the one great family of which he forms a part? And, instead of being lowered in value by being made *common* property, does not this very circumstance enhance their inappreciable worth, by the tender ties of sympathy which it arouses and cherishes. Oh! what stores of happiness, what inexhaustible fountains of delight are lost to our race, for lack of something to *stir* the deep fountain of feeling in the tender mind of infancy; to *attune* its ear to the living poetry engraven on every rock and tree; to *anoint* his eye, that he may read the spiritual meaning which lurks beneath the surface of all the works of Nature.

"The charming landscape which I saw this morning," says a modern writer, "is indubitably made up of some twenty or thirty farms. Miller owns this field, Locke that, and Manning the woodland beyond. But none of them owns the landscape. There is a property in the horizon, which no man has but he that can integrate all the parts. This is the best part of these men's farms, yet to this their land-deeds give them no title."

The reading-books of which I spoke in No. V, are well calculated to assist the teacher in developing the sense of beauty in young minds. They abound in allusions to the beauties and harmonies of nature, and in questions leading the children to observe them of their own accord. The teacher should follow out, as far as may be necessary, the track opened up by the writer.

BYMOND.

NO. VIII.

Having treated, in the former numbers, of the *means* of moral training, under the several heads of the Bible; of practical Development of the Conscience, by appropriate questions and suitable stimulus to action; of Vocal Music; and of the taste for Natural Beauty; the only remaining item is that which has been included under the title MISCELLANEOUS. Many important points here press forward for notice. But, in order that the proposed limits may not be overstepped, each shall be treated as briefly as perspicuity will permit.

PROMISES. The first subject that occurs is one on which we are all exceedingly apt to err, viz.: the exaction of promises from children. How frequent, nay, how universal is this practice! How natural to say, when a child has done wrong, *Will* you be good, or, *will* you ever do that again! And yet, were the consequences considered, surely it would be the last practice we should willingly adopt. We all know the heedlessness, the forgetfulness of the child. We know that in most cases he will commit, over and over again, precise the same offense for which we are chiding him. Why, then, should we place him in so dangerous a position? Why engender so pernicious a habit? Why should he be tempted to a fault tenfold worse than the original act, because it is the main root of all evil, viz.: a *deviation from truth*—a breach of promise? Why is it necessary for him to *promise* at all? Is it not sufficient that we point to what is wrong, direct to what is right? Does the law require a promise to make it binding on the people? Does God claim a promise that we shall obey his commandments? Shall we tempt our children to wrong with the same voice that we pray, lead us not into temptation. No, no. Let us rather dissuade them from rash promises. Let us refuse to receive them; teach them that their word is not to be passed on every trifling occasion; that it shall never be given without thought, but once passed, it shall be binding as an oath. What a beneficial effect would such a change of measures on the part of parents eventually produce on the state of society! Compare it with the universal scepticism, the utter want of faith in man that now prevails, and say whether it be not worth while to make an effort to maintain it. To break ourselves of

a practice which has become so habitual, however, is far from easy. We must be heedful, and set a close guard on our lips, or we shall surely relapse. The question to a child must be, *are you*, not *will you* be good!

POLITENESS. Politeness is very rarely considered a part of Christian morals; yet, when thoroughly examined, its claims as a virtue will be considered well deserving of attention. True politeness has three sources: good nature; humility and good sense. He who sincerely desires to become *universally agreeable*; who in *all* his social intercourse consults the comforts of others; who trembles to inflict the slightest pain: such a one is in the strictest sense a polite man. Etiquette, though frequently miscalled politeness, is something very different. The former relates merely to external expression; to ceremonious modes of speech, to bowing, and other dancing-school flexures; the latter resides in the generous bosom. The gentleness, the tenderness, the delicacy, the patience, the forbearance, the fear of giving pain, the repression of all angry and resentful feeling, the respect and consideration due to a fellow-man, what is all this but the very spirit of politeness; what is it, indeed, but the very spirit of Christianity? Hear what Jesus himself says on this subject: "All things whatsoever ye would that men should do to you, do ye even so to them; for this is (not a part, mark ye, but) *THE LAW, and the prophets.*" Now, if it be recollected, that the *whole* of the then existing revelation consisted of the law and the prophets, it will be seen what force the Savior intended to give to that beautiful precept, which contains the very quintessence of politeness,—the politeness of the heart. Is it not desirable, then, that our youth should be deeply imbued with this divine principle, that our teachers should fully understand the best methods of substituting the spirit of *true* politeness in their pupils, in place of that ridiculous system of *dead forms* which has usurped its place in too many of our schools, and which too many parents still seem to value so highly.

KINDNESS TO ANIMALS. This is a subject to which we shall hardly attach too much importance, if we consider what selfishness and hardness of heart is generated by the inhuman war incessantly carried on by children against insects and the smaller birds and quadrupeds. The emperor Nero, we are told, began his bloody career, when a child, by impaling flies. He finished it by the most monstrous barbarities against the early Christians. A natural, an easy transition. Cruelty in infancy, surely, lays but a wretched foundation for that enlarged Christian sympathy, that "droppeth as the gentle dew of heaven;" a sympathy embracing not merely the whole *human* family, but every creature capable of feeling. Let the sentiment, "my Father made and cares for them all," be strongly impressed on the mind of childhood, and of how much should we be spared of that bitterness which makes man an enemy to man, of that enmity which makes countless thousands mourn.

How unnecessarily cruelty is perpetrated every day, says Miss Bremer, because people never think of what they do! and how uncalled for, how unwor-

thy is cruelty towards animals! The Arab *tames* his horse by the power of love alone; we *break in* ours by cruelty and severity. There were laws in the old world which made mildness towards animals the holiest duty of man, while the violation of such laws was severely punished; and shall we, who acknowledge a religion of love, shall we act worse towards the animal creation than the heathen did? Did not he, who established the kingdom of love on earth say, that not a sparrow fell to the ground without the knowledge of our Heavenly Father? Yea! all the unnecessary sufferings which the intemperance, the folly, the cruelty of man occasion to animals is also seen; and heard, too, in the lamentable cry and complaint of the sufferers.

But this spirit of universal love and kindness can never be properly carried out, unless the teacher exemplify it by his own conduct towards his pupils. How can the lesson of love produce an effect, falling from lips which have just been soiled by vituperation or harsh expressions? Men are only beginning, says one of our best authors, they are only just beginning to have slight glimpses of the vast, the illimitable power of love. Oh! may the moment be hastened when all shall realize it to the fullest extent! Much pains has been taken in the reading-books noticed in former numbers to point out the hatefulness, the *sin* in fact, of cruelty to animals. The questions are managed somewhat on this principle: Who made the animal you have been reading about? Is he present everywhere? Do you think he saw —, when he treated it so? Would that please or displease him?

DYMOND.

[We insert two of these numbers this month because we were obliged to omit one in our August No. and must do the same for that of October. Eos]

PECUNIARY VALUE OF SCIENCE. The following anecdote is related by Aristotle of the famous philosopher Thales, of Miletus, who flourished about 600 years before the Christian era. His poverty was thought to upbraid his studies as serving no *gainful* and therefore no *useful* purpose. But by his skill in meteorology, he contrived to wipe off the reproach, for as his science enabled him to foresee that there would be an extraordinary crop of olives, the next season, he hired in the winter all the oil presses in Chios and Miletus, employing his little fortune in giving earnest money to their owners. When the gathering season approached, and the olives were seen loading the branches, every proprietor was desirous of providing oil presses at once. But Thales, having hired them all, and having them in his possession or under his control, was enabled to command the market and to let them separately at the highest price—by means of which he not only accumulated great wealth, but taught his unreflecting countrymen that even the philosophers might easily become rich if they chose, albeit riches were not the primary object of their pursuit.

EDUCATION OF COLORED CHILDREN IN OHIO. A bill passed the Ohio House of Representatives, on the

8th of February, relative to the education of colored children in that State. It provides that in every town, village, or township, where there are twenty colored children, a school may be organized for such children, with directors and officers for such schools. It also provides that school taxes, paid by colored persons, shall be appropriated to such colored schools. It expressly excludes colored children, and schools organized for them, from all participation in or benefit from the school fund, but gives such schools the benefit of any money or property donated to them. It also provides that no colored child shall be admitted into schools with white children, to enjoy the same benefits, where any parent of a white child in such school, or any legal voter, whether having a child at such school or not, makes any objection to such child being so admitted."—*Christ. Chron.*

EMPLOYING A PROFANE SCHOOLMASTER. In reply to an inquiry from a village committee, whether habitual profanity should disqualify a man as a public teacher; the Superintendent of Common Schools in New Jersey justly says, "Profanity is not less a violation of morality than falsehood, drunkenness, or theft. It begets a recklessness of thought and action—a moral vacuum, where every vice may find a sure receptacle; and in a person intrusted with the care of youth—their character, their prospects, and their usefulness—it should not, and cannot be allowed."

SCHOOLS IN KENTUCKY. The vote at the recent election in Kentucky, in favor of a common school tax, was overwhelming, and shows quite conclusively that the sentiment of the people of that state upon this subject is far in advance of that of their Representatives in the Legislature. The tax is to be raised by a levy of two cents on the one hundred dollars of property.

A SHOWER OF COMPLIMENTS. "How fortunate I am in meeting a *rain-beau* in this storm," said a young lady who was caught in a shower the other day to her "*beau of promise*," who *happened* along with an umbrella. "And I," said he gallantly, "am as much rejoiced as the poor Laplander when he has caught a *rain dear*."

The steed called lightning (say the Fates)
Is owned in the United States.

'T was Franklin's hand that caught the horse;
'T was harnessed by Professor Morse.

For the School Journal.

Duty of Parents to visit their Children while at School.

There is perhaps no part of parental duty more sadly neglected than this. "Out of sight and out of mind," seems to be the maxim of too many parents as they send their children day after day to the school-room, to imbibe those principles, form those habits, and receive that instruction which, as a beacon light, shall guide their footsteps in the paths of virtue and

usefulness, or lead them downward to ruin and disgrace.

To the intelligent and faithful parent, no place is dearer than the school-room. He has deposited here his dearest treasure, compared with which the wealth of a thousand Indies is as dross; a treasure capable of indefinite increase and improvement; a treasure infinite in its capabilities and immortal in its duration.

What parent would trust his cattle or sheep, or even his swine to the keeping of another, without visiting them occasionally to see how they were thriving or fattening? What parent will lease his farm to another without well attested bonds that it shall be faithfully tilled, that the fences shall be kept in good repair, and that, in every respect, it shall be kept unimpaired. And yet how many intrust their children day after day, week after week, and year after year, to the hands of others, often entire strangers, without once visiting them, and in many cases, without even inquiring after their progress and welfare.

Parents should visit the school for the following reasons:

1. That they may be acquainted with the teacher of their children, and be the better able to use their coöperative influence with his. Parents and teachers should work together as one. They should know the wishes and designs of each other, and labor mutually to carry them into effect.

2. That they may witness for themselves the management of the school. Much of the difficulty that frequently exists between parents and teachers is the legitimate result of ignorance on the part of parents, respecting the real management of the school-room. The teacher, perhaps, has occasion to chastise a scholar for some misdemeanor; the scholar goes home with a sad report of his wrongs, accompanied by one of his playmates to attest to his abuses from the teacher. The parent, not daring to doubt the veracity of his child, at once gives judgment against that teacher, and thus, though undesignedly, gives countenance to the repetition of a similar or greater offence on the part of his child.

Now, if parents were fully acquainted with the teacher of their children, and with his management in the school, if they were as willing and frank to converse with him respecting the errors as they are the virtues of their children, in nine cases out of ten, these little petty difficulties which so often mar the teacher's happiness, and many times impair his influence, would perish in their chrysalis state, or rather they could never exist.

3. Parents should visit the school that they may witness whatever is praiseworthy or censurable on the part of their children, and thus be able to encourage them in the former and deter them from a repetition of the latter. What teacher has not seen the countenances of his pupils brighter as they anticipated a visit from their parents, and witnessed with pleasure the laudable pride with which they resume their seats after the recitation of a well learned lesson in the presence of their parents. It seems to give a fresh impulse to the blood through their youthful and buoyant hearts, and to inspire them with increased fidelity to go onward and upward in the path of science and virtue.

4. They should visit the school that they may learn something of the teacher's duties, his labors and his trials, and that they may cheer his tired and drooping spirits amid the multiform and never-ending trials and perplexities of his profession.

As the faithful teacher labors on week after week, sparing neither physical nor mental strength in whatever can benefit his pupils, as he feels himself careworn and weary, it is pleasant and encouraging to hear a cheering word from those whose interests are so closely allied to his own—from parents. It should be remembered that teachers, like other men, have human nature and feelings common to other men; and it is not strange if they sometimes feel discouraged and disheartened as they witness the apathy and indifference often manifested towards them, and towards their labors, by those from whom they have a right to expect the warmest sympathy and most hearty coöperation.

5. Parents should visit the school as a duty to themselves, to the teacher, and their children; as a duty prescribed by their Creator, and one which they cannot neglect with impunity. He commands them to train up their children in the paths of usefulness and virtue, to train them up to love and serve Him, and the School is instituted as the most efficient auxiliary in carrying out this important requirement of the Creator into fulfillment, and parents cannot remain guiltless while ignorant of, or indifferent to the interests of so important and indispensable a means for the education of their children.

If parents feel a desire to see their children improve, let them manifest that desire by visiting them at the School-room.

C. H. NORMAL.

Westfield, Ma., State Normal School.

Mental Arithmetic.

The following are some of the methods by which mental arithmetic may be successfully taught. The pupil should prepare the lesson without the aid of a slate, or anything upon which to make figures. When the class is called to recite, let the teacher read the problem to be solved, once, or twice, slowly and distinctly, to the whole class, and when it is well understood by every pupil in the class, let him call upon some one to repeat the problem and analyze it.

If any member of the class appear careless or inattentive, he should always be called upon to solve the problem.

Second method, Read the question as before, and after giving time for each pupil to perform the solution mentally, call for the answer, if they do not all respond promptly, call upon one of the delinquents to rise, repeat the question, and perform the analyses before the class. If all answer, but some incorrectly, ask one that has given an incorrect answer, to analyze it. But if all answer accurately, require any member of the class to perform the solution.

Third method, Let the teacher read the first question, and call upon some one to analyze it. If the one called on, is successful, let him read the next question, and the teacher name the one who is expected to solve it, let this last pupil read the succeeding one;

never allowing a scholar to read to the class, that has failed to solve his problem. The pupils should be required to watch carefully, every step in the process, and when an error is discovered, let them raise their hands.

If the class is somewhat advanced, permit the one who discovers the mistake, to proceed with the solution. This in most cases will secure almost breathless attention from the whole class. It will also stimulate them to aim at correctness in their mental calculations.

Neither of these methods should be followed exclusively, but the teacher should vary his plan of conducting recitations, to suit the circumstances, changing as often as he finds the class is careless or inattentive, but, never making any one particular method of teaching, his "Hobby," he should follow the plan that will give to every member of the class, the most thorough knowledge of the principles in the several lessons.—*Teacher's Adv.*

For the School Journal.

A Cheap Luxury.

Those who wish to enjoy the luxury of a Shower-Bath, (and those who know any thing of the virtue there is in cold water thus applied, will place it among or above luxuries,) on economical principles, will find the following plan, with a little fixing, such as almost any man can accomplish on a rainy day, to answer their purpose completely.

The apparatus consists of a sap-tub and a milk-pan, that has become *hors de combat* for dairy purposes.—Take two pieces of board of sufficient length, to extend across the corner, or some other convenient part of an outer room, such as most farm houses have attached to them, and secure them at such a height that a person can stand beneath them, and such a distance apart that, after cutting a notch in one edge of each, the pan may be received between them—perforate the bottom of the pan after the manner of a strainer, and place it securely and level between the boards.—Through the centre of the bottom of the sap-tub make a hole of not less than an inch in diameter, cover the hole on the inside with a piece of leather, secured at one end by a few tacks, the other end left loose, like the valve in a common pump—tie a piece of string to the loose end, and pass it over the side of the tub—place the tub in the pan with a few quarts of water in it, and all is ready for use; by pulling the string, the valve is opened and a liberal shower is the result.

I should like to whisper in the ears of some of our teachers, an invitation to give the Shower-Bath a trial, along with the valuable advice given in "The School-Master," by George B. Emerson. Let them take it early in the morning, and rub off with a good rough towel, and I opine they will find it a much more serviceable ally, in producing that calmness, gentleness and firmness, which are so peculiarly essential in a teacher, than all the weeds, foreign or domestic, that they can smoke or chew in the remainder of the day.

H. M.

Monkton.

THE AGRICULTURIST.

For the Vermont Agriculturist.

Agricultural Science.

The following extract from the proceedings of the British Agricultural Society, embraces some important points for the consideration of our farmers; especially, first, that any land may be improved by manuring and a proper rotation of crops, so as to increase its productiveness indefinitely. Secondly, to do this profitably, the precise kind of manure which the land requires to produce a given crop must be applied; and third, the need of scientific knowledge on the part of farmers, by which they may be able to analyze their soils and discover what is wanting to produce the required crop. A thorough knowledge of these principles would be of more value to a farmer, than a fortune, and he could not bestow on his children a richer legacy than such an education. In view of the importance of such knowledge, other states are turning their attention to the establishment of Agricultural schools and colleges; and if one of our colleges in Vermont were converted into an institution devoted more particularly to the education of farmers as a profession, and to the preparation of teachers for our common schools,—thus subserving the two most important interests of the State, Agriculture and primary instruction, very great benefits would result to the mass of community. In such an institution might be taught all the common English studies, mathematics and the natural sciences,—and in a special department, instruction given in regard to the science of teaching. Trained in such an institution, teachers would be prepared to instruct not only in the branches required by our statute to be taught in common-schools, but also on those branches particularly connected with agriculture, and thus be the means of diffusing more generally through community agricultural science.

Another plan may be suggested, adapted to the present state of agricultural science: viz. that some one in each County, or some three or four in different parts of the State, of suitable qualifications, be employed to analyse soils and give direction in regard to the culture needed and the kind of manure required,—to whom any farmer could make application, and carrying samples of his soil, get the desired information for a given price. These individuals would constitute a profession, who would charge for their professional services on the same principle that a physician does, and might be consulted at their offices, or called to visit and examine farms in their vicinity and make suitable prescriptions.

AGRICOLA.

DISCUSSION ON MANURES.

According to the arrangement of the council of the society, Professor Johnston undertook to give a lecture, or rather to commence a discussion upon the action of manures, in the Picture Room, Nelson Street, at five o'clock in the afternoon. The large hall was quite filled by the hour of meeting, from 1000 to 1800 persons being present. Lord Portman presided; sup-

ported by Mr. Miles, M. P. The chairman having stated the object of the meeting,

Professor Johnston said, that the relation of British agriculture to the present condition of the country involved two points—the one, how they might produce a larger amount of corn; and the second was how that corn could be produced at a cheaper rate. The first of those ends might be attained either by bringing in a greater quantity of arable land, which the meeting was aware was now exceedingly difficult, or by causing the land now under cultivation to produce a larger amount of corn. The second end, of growing corn cheaper, might also be produced in two ways; either by lowering of rent, wages of laborers, or by obtaining an increased production without an equal increase of toil. Now, if he were asked how much of the soil of this island was capable of increased production without an equal increase of toil, he should say that he believed nine tenths of the whole land in the country could grow more corn than it did now, and at a cheaper rate. To another question which might be put—how much more could be grown?—it was difficult to give a positive answer, but there were certain facts already known which threw some light upon it. For instance, he might take two parts of the island, resting upon the same geological formation, and of course having nearly the same soil—if one of these districts grew 30 or 40 bushels per acre, then he was entitled to say that, whatever the one district did the other might do. He had lately had occasion to visit the estate of a friend of his, now dead, the late Mr. Aitchison, of Dromore, near Edinburgh, who showed him his farm books, in which the produce of his several fields had been kept with great accuracy from the beginning of the present century, and he found that in 1890, 150 Scotch acres produced 54 bushels of oats per acre. And in 1832 (twelve years afterwards) 120 Scotch acres produced 40 bushels of wheat per acre. He examined the soil, &c. of the farm, and he found nothing in it that would cause any one to expect these extraordinary crops; the land was dry, to be sure, but it rested upon the coal measures, with an exposure to the easterly winds from the Frith of Forth. Take another case. He had no doubt many present were familiar with the great crops of turnips and oats raised in Eastern Ross, and the eastern coast of Sutherland. Now, the land in South Wales, which the farmers there described as eating up all the dung, and drinking all the water, was precisely of the same character, and it had the advantage of climate into the bargain; why should it not be equally fertile? Then let him compare fertile soils with infertile, and he would say the great question was to bring about such a state of things as would cause the infertile soils to produce as much as the fertile soils now did. He said there was no limit which they could safely assign to the progress of agricultural skill in improving their poor lands. (Hear, hear.) Then the next question that came was, how could this increased production be brought about economically? for, let him here say once for all that improvements were nothing to him if they did not much more than repay the farmer his outlay upon them. One way of doing this was by

the profit will be about \$5.—If the milk is ten quarts a day, the profit will be \$ 11 75."

The above paragraph has been in circulation a long time. We will give a volume of the *SCHOOL JOURNAL* for a year to the first boy who will show how the estimate is made, and prove it correct.

EDITORS.

The Best Butter.

The difference between 12 and 25 cents as the price of butter is enough to warrant a very thorough examination of the subject. Our own attention has recently been called to a single point in regard to dairy management; and we may do some readers a service by stating it for practical investigation. We allude to the practice of churning the whole milk and cream together instead of the cream alone.

The navy of the United States on foreign stations requires about 60,000 lbs. of butter annually. The advertisement for it requires the best article. Persons offering proposals are required to furnish satisfactory evidence that their butter "will stand tropical climates and preserve its sweet and wholesome qualities for years."

Such butter has been procured; but it is the opinion of the persons having charge of the contract that none but that made in Orange County, N. Y., will answer. The subject has recently been investigated by committee of the New York State Agricultural Society, and the results published. Among the testimony adduced is the letter of Mr. Hawley which we copy from the *Cultivator*. See page 78.

In that letter the reader will please notice particularly what is said in regard to *churning the milk with the cream*. The writer regards that as an *essential* part of Orange County management,—as what gives the butter a peculiar creamy flavor, and secures, in connection with other means, its long keeping. The committee adduce opinions from sundry reliable sources in favor of the position that the Orange County butter owes its peculiar excellence, not to the locality and the feed, but to the management. A prominent characteristic of the management is,—to churn the milk without skimming.

Mr. Physick of Germantown, who for several successive years received the first premium for butter from the Philadelphia Society, in describing his process, says:—"The milk is put into the milk house till four milkings are collected; then *the whole milk and cream* are thrown into a common barrel churn," &c.

The Mark Lane Express, describing the process recommended in making Irish butter for the London market, says: "Strain the milk into coolers, sweet and dry; keep it from two to four days; then put the *whole of the milk and cream* into a clean churn," &c.

In this process, hot water may be added so as to raise the temperature to 65 or 68 degrees; and it requires three to four hours' churning. Of course a large churn is needed, and some power other than that of the human arm is desirable.

These authorities in favor of churning milk without skimming, seem to us sufficient to command the at-

tention of enterprising Vermont dairy-women. The points alleged to be secured by it are superior flavor and superior keeping qualities. By means of the latter—if the views expressed are correct—June butter may be kept through the summer without the least deterioration.

For the Vermont Agriculturist.

The Maggot in Onions.

I noticed in the Boston *Cultivator* of August 26, an inquiry in regard to what would destroy, or prevent the ravages of the maggot in onions. I will state the course which I have pursued for two or three years and which I believe has proved a pretty effectual remedy. I have uniformly had good onions since I adopted this course.

I place by the side of the onion bed an old tub or half-barrel, and fill it two thirds full of hen manure, then fill up the tub nearly full with water and let it soak two or three days. With the liquid or steep thus prepared, I water the rows once a week—filling up the tub with water after each watering. I am careful to see that some of the liquid is applied, so far as possible, to each plant.

Although I frequently discover maggots in my onions, I find that the application of this liquid checks their spread, and at the same time the growth of the onions is promoted by the manure. I suppose the unpleasant effluvia of the steep drives off the maggot and prevents its ravages. AGRICOLA.

FRUIT GROWERS' CONVENTION. The Great National Convention of Fruit Growers, to be held at Judson's Hotel in this city, on the 10th of October, bids fair, from the extensive preparations in progress, to be a fine affair. Twenty-five delegates from the Pennsylvania Horticultural Society have been commissioned to represent that body, and notices of other appointments have also been made. One of the principal objects in calling the Convention is to effect a comparison of fruits from different sections of the country, with a view of arriving at correct conclusions as to their merits, to settle doubtful points concerning them, and to adopt if possible, a uniform and systematic nomenclature.—*Tribune*.

Fat Lambs. Mr. Jesse J. Doolittle, of Waterbury, Conn., lately slaughtered three lambs, raised by Mr. Miles Todd, of East Farms, which weighed unitedly 291 pounds. Their separate ages and weight were as follows:

One lamb 4 months 28 days old	weighed	98 lbs.
One do. 3 do. 28 do.		85
One do. 3 do. 19 do.		108
Total,		291 lbs.

An acre of ground will contain one hundred and sixty fruit trees, 16 feet apart each way, 4,843 hills of corn 3 feet apart each way, 174,250 stalks of wheat six inches apart each way, 62,722,510 blades of grass one inch apart each way.

Agricultural Education.

In the last Patent Office Report we find an account of an examination of students of agriculture at Breslau, Germany, written by an American gentleman who was present. We recommend it to the careful attention of our readers, as suggesting many subjects for observation and study. There are not a few among our younger farmers and intelligent farmers' sons, who may take up these subjects, and with the aid of books and careful observation, become masters of them, one after another, in a few years, while prosecuting their regular farm work. There are no schools among us, nor are there likely to be very soon, at which young farmers of moderate means can receive such instruction on any terms compatible with their limited means. They must educate themselves.

On the occasion referred to, 16 pupils of agricultural schools, from 16 to 23 years of age, were examined.

EXAMINATION OF STUDENTS OF AGRICULTURE AT BRESLAU.

After the necessary preliminaries, the pupils were required to answer a number of questions in writing; after which they were taken to an estate called Rosenthal, (Rosendale) near Breslau. In the yard, the pupils were shown a wagon, which was marked on thirty six parts; a plough, on thirty-five parts; a hacken, (a kind of plough or cultivator,) in five; a harrow on six parts, making eighty-two separate parts. Each pupil had to put down on paper the name of each part, as they were marked, to show whether he was acquainted with all the parts of the implements. After that, they had to show their skill in taking apart and putting together implements, and in case of breakage, to mention the most efficient way of repairing, &c. A sheep was then brought forward, and they were required to set down on paper the answers to the following questions:—

1. Is this sheep healthy, and why?

2. How old is this sheep?

3. How is this age called in the shepherd language? Each one was next required to catch a sheep himself and examine it, whether it had the foot rot, and describe what are the signs of the foot rot. They had also to point out upon a sheep the places where the worst wool grows and on which place the best. To point out the places where the faults of wool are most liable to be inherited.

Several head of cattle were now brought before them, and the following questions propounded:

1. How much milk can a cow of this breed give, when fed with grass or other green fodder, how long since she had a calf?

2. How many pounds of fodder does a cow of this breed require per day, during the summer?

3. How much during winter, and the cost?

4. How many calves has this cow had?

5. How old is this cow?

6. What kind of breed, and why do you say so?

7. How much will she weigh?

They were then called upon to estimate the probable amount of meat and fat, by examining the animal in the customary way of butchers. After that they

were examined upon horses; the horses were first examined by the pupils, and the following questions required to be answered:

1. What are the peculiar qualities of this horse as a plough horse?

2. Which of these qualities are requisite for a good plough horse, and which are not?

3. How old is this horse?

4. Several places were pointed out to the pupils, and they were asked what kind of disease affects this part and that part?

5. What are the names of the different parts of the hoof, and where are those parts?

The pupils were now conducted to the barns, where they had to show their skill in making straw bands, in cleaning grain, &c., in sowing grain, &c.

After this the pupils were taken to the fields, first to one of a light soil, and afterwards to one of a heavy soil, and the following questions were put to them before a fresh parcel of soil just dug up:

1. What is the name of this kind of soil?

2. What are the names of the principal parts of which the soil is composed?

3. What is the name of the subsoil?

4. Is the subsoil retentive or not?

5. What kind of crop succeeds the best on this kind of soil?

6. How large would you make the beds on such a soil? And why?

7. Is this heavy or light soil, cold or warm?

The same questions were asked as to another kind of soil at a different spot. The pupils returned and gave from their notes the required answers.

The questions which they were obliged to answer in writing, were as follows:

1. In the case of a heavy soil, sown with wheat and oats, and in that of a light soil sown with rye,—state for every month.

1. How much ploughing and harrowing has to be done?

2. With how many horses or oxen?

II. How much manure will you require for it, expressed in loads? Do you call that heavy or light manuring?

III. How will you treat the manure in the stable, in the dung-hill, and in the field?

IV. When you have at command Jauche, (drainings of dung-hills), and mineral manure, how and for what crops would you use them?

V. What kind of weeds appear in the summer and what kind in the winter crops?

VI. And how will you destroy them, when there are such?

VII. How can you prevent these weeds from coming up?

VIII. You have good and bad meadows—to what kind of cattle will you give your best, and which the worst kind of hay?

1. In the naked fallow, suppose that there is planted rape after clover, from which one cut was taken, let there be sown wheat. After peas, let there be planted potatoes—ten acres for each kind of crop:

The required work for each kind of crop to be done in two days!

How much labor of cattle is required in every period?

2. A field of twenty acres is to be manured with eight loads per acre, about the month of June: The field is 1000 paces from the farm yard: And must be done in five days: The manure must be strewed in three days:

How much labor of cattle and hands is required?

3. A meadow of middling quality, of thirty acres, must be mowed in two days; the grass must be immediately spread; when dry, it has to be brought home in a day, about two miles from the yard. How many span of working cattle and labor of hands, how many men and how many women are requisite?

4. The crop of a rye field of twenty acres must be brought home in two days. How many laborers To make straw bands? To mow? To gather and bind? To bring together, and for loading? To bring to the barn? How many span of horses or oxen to haul it?

5. The crop of ten acres of wheat, oats, and barley, must be threshed in nine days and taken to the market, ten miles distant. How much labor, &c., of men and animals?

6. In a heavy soil there shall be made, in two days, a ditch of three feet depth, three feet wide at the top, one foot at the bottom, three hundred yards long; how much does it cost per yard, and how many hands must be set at work?

7. A meadow of good quality, of twenty acres, about two miles distant from the farm yard, must be mowed in one day—if possible, dried in three days; the hay must be brought in, in half a day and stacked:

How many persons and teams are necessary; and what is the probable crop from such a meadow?

To show their skill in making reports and other statements in writing, the following subjects were given:

1. A superintendent reports to his superior an accident on the estate, and describes the necessary steps he has taken.

2. The superintendent gives a written order and instructions to the overseer of the farm.

3. The superintendent makes a weekly report on the income and expenses of the grain and for seed, fodder consumed by the cattle, on an estate where there are kept sixteen servants, twelve horses, and eight oxen.

The next day, the 7th of September, the result of the examination was made publicly known. For this purpose the board of examiners, the pupils and audience assembled at the university, and the following statement was made:

That most of the pupils showed skill in the practical manipulations; but that by some, not only skill, but thoroughness was wanting. They were then admonished on the requirement of these practical manipulations in the farming operations.

The trial, as to the names of the parts of implements, as well as the remedy when broken, &c., was declared not satisfactory; that a better knowledge of the parts of such implements with which the

farmer has every day to work, is required and expected.

In the examination of soils and the best kinds of crops for them, the pupils showed considerable knowledge and correct views, but the knowledge in sheep breeding was rather slight; they showed more experience in horned cattle, and the most in their judgment of horses.

In the examination on the culture of crops, they proved well experienced; less so in that of herbage and fodder; had little knowledge in the value of a substitute for fodder, but were entirely deficient in the *economy of farming*, and showed a want of judgment in the quantity of force required for certain labors. The study of this important branch was recommended to their special attention, to acquire a correct knowledge of the amount of labor required for agricultural operations, in order to economize the most important capital, time, which can never be replaced.

At the close of the president's practical remarks, it was stated that it was the object of the association to ascertain what the young culturist has acquired during his practical studies; that a higher practical knowledge is required to become a director of estates, and that can be the best accomplished by traveling. Further, that it had been hitherto the belief that every simpleton could be a good agriculturist, and when every attempt failed to get him along in the world, the farming business was looked upon as the receptacle of all family prodigies of dullness. Of this error, the bad effects were every where visible. It was proposed to the general meeting, to take under consideration the establishment of proper agricultural schools for the less wealthy class.

The following question, which was brought before the meeting on the 9th, was continued on the 10th:

"How can the injurious effects be prevented, which railroads produce upon agriculture, by absorbing all the funds (capital)?" It excited great interest. It was agreed that they had the contrary effect; that the construction of railroads through countries increased the means of the lower class; the shares or scrip (action) are a new kind of money, which increases the general circulation.

The third question was next taken under consideration. It was generally agreed that small estates yield a higher revenue and require a larger amount of capital, but that no general rule could be given.

The fourth general question was, "Are institutions necessary in which a young man can all acquire all practical agricultural knowledge?"

This question was ably debated by the professors of agriculture. It was thought that the separation of the theory from practice was injurious—both must be combined. Professor Schweitzer of Tharand in Saxony, thought that both can be acquired separately; he recommended that practice should be first learned, and theory afterwards—that the young man should have obtained a good common school education before he undertakes the practical study, and should afterwards finish his scientific education at an

agricultural school. Thær (the son of father Thær) demanded also a thorough elementary education, and then the learning of all the practical manipulations. These practical institutions, he thought, should not be too extensive, so that the owner may attend to the whole himself.

The views of Professor Schweitzer were generally entertained.

Butter for the United States Navy.

The idea that no butter made out of Orange county, will "resist the action of tropical climates and preserve its qualities for years," is an utter absurdity. I think, that *not one-third* of the butter sold as "Orange county" is made in that locality. That county has during ten years past, sent out hundreds of emigrants to the counties of Sullivan, Delaware, Chenango, Broome, Tioga, Tompkins, Chemung, and perhaps others in the state of New York, who have continued the manufacture of butter for market, and who, at the end of each season have been in the habit of transporting their butter in wagons across the country to the different points of shipment in Orange county, and there shipment is as from "Orange county." Many of the persons had, for ten years before emigrating, regular purchasers in New York for their butter, who it was understood were to take their produce each year, when made, and pay the highest market price for it. These relations were in many instances, continued for several years, previous to their emigrating from Orange county, and many now continue them without the least objection being made to the quality of the butter.

The term Orange County Butter seems to be misunderstood. • • It does not mean (as I understand it,) the locality where made, but a peculiar method of manufacture, the perfect neatness and cleanliness of everything about their dairies—the churning the *milk* instead of the cream, and the attention to the quantity and quality of the salt used, are the principal peculiarities. The churning the milk I deem essential to butter intended for long voyages. It gives it a peculiar firmness and fineness of texture, and wax like appearance, which butter made by churning the clear cream, seldom has. These peculiarities can generally be detected by the eye. There is also a cream-like flavor, in milk-churned butter, which I have never found in butter manufactured in a different manner.

I believe the highest price paid for dairies in New York, for several years past, has been paid for several dairies from Chemung county. Being at the table of a certain well known *gourmand* in New York, in the spring of 1847, I remarked the very fine quality of the butter—He replied that such butter could not be made out of Orange county. The conversation continued, until finally the original firkin was brought up, when I found it was branded John Holbert, (Premium.)—Mr. Holbert resides in Chemung county, and it will be recollected took the *first premium* at the State fair in Saratoga, in 1847, for butter made in June. This gentleman told me, he had his supply of butter of *this dairy*, for several years, of a particular grocer who alone sold it, at 33 cents per lb.

The opinion of the gentleman who has charge of the butter department of the U. S. Navy, "that no butter made out of Orange county, will resist the action of tropical climates," I know to be erroneous. A dairy made in this county, (Broome) has been sent abroad much of the time for ten years past. In 1839 it was sold in St. Croix, to the Governor, for 75 cts. per lb. In 1840 it was sold in New Bedford, and went a whaling voyage. I saw some of it after the expiration of nearly *four years* from its manufacture, as sweet, and in as good condition as when made. The same dairy has since been sold in New Orleans, in Natchez, and in Mobile, and there never has been any complaint as to its quality.

I shipped some butter, that was the product of this county, to Canton, in 1846, which, under very disadvantageous circumstances, opened as fresh as when made, and proved so good, that the shippers have each year since applied to me for butter for cabin stores for their ships. I broke up the original firkins and procured a quantity of small white oak kegs, which would contain from 15 to 25 lbs. each, and repacked the butter, selecting the best from a large quantity. These kegs, when filled, were put in very large hogsheds, and the interstices filled with rock salt, and the casks placed in the hold of the vessel. This butter when sold, (about eighteen months after its manufacture) was in as good condition as when made. The small kegs were not used in reference to the preservation of the butter, but merely for convenience in retailing at Canton.

The exportation of butter for the supply of the different cities that are along the southern coast of Asia, is probably destined to be a very considerable business. The entire supply for the immense cities in the possession of the British East India Company being derived from Europe, (mostly from Ireland, but some little from Holland,) and it is usually purchased at home, at a price which would fully pay an American shipper at its destination.

The relative proportion of our county, that is adapted to the finer qualities of butter, is probably as small as any other article of general necessity. But such of the southern tier of counties, and also of the central and northern portions of the State of New York will, (when well cultivated,) produce the various grasses necessary to give butter the peculiar flavor and aroma of Orange county, when properly manufactured.

The emigrants from Orange county before alluded to, all agree in opinion, that as good butter can be made in their new location as in Orange county.—Minnisink is cited in the circular as being the locality producing the best butter in Orange county. A Minnisink dairywoman in this vicinity, who had for many years the reputation of being one of the best in that town, made her first lot of about sixty firkins here last season, and says it was the best she ever made. All the Orange county emigrants agree in opinion, (and many of them are persons of much experience and close observation in their business) that in favorable situations they can produce as much butter and of as good quality as in Orange county.

Yours, &c.

J. J. HAWLEY.

Binghamton, July 24, 1848.

Hay Caps.

The following communication showing the great utility of hay caps have been forwarded to us which we are pleased to lay before our readers, corroborating what we have already published on this subject.

NEW USE OF COTTON CLOTH.

A. A. Lawrence, Esq.:—Dear sir:—I take pleasure in replying to your inquiries about the "Hay Caps," made from your Salmon Falls Sheetings. They have fully answered my expectations, preserving the Hay perfectly, both through long rains and heavy showers; not only saving a great deal of labor in shaking the rain out of the hay, but preserving all its good qualities, especially that agreeable aromatic perfume which is always lost when the hay is much wet.

I am indebted for the hint of this valuable improvement in hay making, to a piece published in the "Boston Cultivator," June 5, 1847, extracted from the "Maine Farmer." Those then described were made of cloth thirty inches wide and were five feet square, which are too small. Those which I have, made of your yard wide sheetings, two yards square, are as near right as can be. The two breadths are sewed together, with a stout hem at the ends, the corners turned back about two inches and sewed down strong, leaving a loop through which is run a stout string of the kind called marline, the ends tied so as to make a loop of an inch and a half in diameter; through each of these, when used, is run a stick of eighteen or twenty inches in length into the hay, slanting it upwards to prevent the loop from slipping off; the hay cocks should be made higher than usual and the cloth drawn tight. The cost is about thirty cents each, namely, four yards sheeting at seven cents and two cents for the line and thread, the making if done at leisure times in a family, will cost little or nothing. Upon the whole, with the experience I have had of their usefulness, I would not be without them, if the cost were double what it has been.

Yours truly,

T. W. PIERCE.

Greenland, N. H., Aug. 3, 1848.

A. A. Lawrence, Esq.: Dear Sir: Your favor of the 27th ult. was duly received. I have waited several days to see the result of the last trial of the caps which we put on last Saturday afternoon, the weather at the time being very fine and promising well.—We had about 350 cocks in the field, about 100 were not covered. On Monday it rained all day, the next day, the hay that was not covered was opened, dried, and got in at night; that under the caps was left, being safe, to be got in at leisure, which was done the next day with as little labor as that of the day before though nearly three times the quantity, and in much finer condition; indeed the rain had no injurious effect upon it.

The 30 inch drillings would not answer a good purpose, and I am not certain, if I were going to have more of them, but that I should prefer cloth still wider than your sheetings, but I am perfectly satisfied with what I have. I have saved my hay three

times already, and those which are washed free from the starch answer equally as well as when first used.

Yours, truly,

Greenland, Aug. 3, 1848.

T. W. PIERCE.

Further Remarks by the Editor. We are informed by Mr. Fatler, the Superintendent of the farm of J. P. Cushing, Esq., of Watertown, that they saved several hundred dollars by the use of hay caps the present season. At one time nearly twenty tons of hay were protected in this way and saved in fine condition, while the hay of others that was exposed was nearly spoiled by a long storm. Besides the saving in hay, there was a great saving in labor; and this last item is not to be reckoned in dollars and cents at the usual prices of labor, but by the great advantage gained in proceeding to cut other lots of grass already ripe enough, instead of spending time in spreading and curing damaged hay. We hope that this important subject will be fully considered by farmers, and that they will be prepared by another season to try the utility of hay caps.—*Boston Cultivator.*

The Markets.

BRIGHTON MARKET, Thursday, August 31.

At market, 700 Reef Cattle, — pairs Working Oxen, 1050 Stores, — Cows and Calves, 3500 Sheep, and 950 Swine. PRICES. Beef Cattle—extra, \$6; first quality, \$5 50 a 5 75; second, \$5 25 a 5 50; third, \$4 50 a 4 75. Stores—Yearlings \$8 a 11; two year old, \$11 a 20; three year old, \$18 a 27.

Working Oxen—Sales at \$60, 72, 80 and \$105. Cows and Calves—Sales at \$20, 25, 29, and \$36. Sheep—Small lots at \$1 62, 1 83, \$2, 2 12, and \$2 33. Swine—Small Shotes 5, 5 1-8 and 5 1-4 c; old Hogs, 4 1 c; still Hogs, 4 1-8 c. At retail from 5 1/2 to 7 c.—*Daily Advertiser.*

WOOL. Boston, Aug. 26.

Prime Saxony Fleeces, wash'd lb.	37 a 38
American full blood	do 33 a 35
do 1-2 a 3-4	do 28 a 30
do 1-4 and com.	do 23 a 25
Lambs, Superfine,	28 a 29
Do. No. 1,	25 a 26
Do. No. 2,	16 a 17
Do. No. 3,	10 a 12

FOREIGN.

Smyrnia, washed,	18 a 21
do unwashed,	10 a 14
Bengal,	8 a 9
Buenos Ayres,	6 a 14
Crimes,	8 a 10
Mexican,	12 a 13
Barbary,	25 a —

—*Daily Advertiser.*

FANEUIL HALL MARKET.

WHOLESALE.			
Beef, fresh, lb.	7 a 15	Apples, barrel,	1 50 a 2 50
Mutton, 1st qual.	6 a 8	do, dried, lb.	9 a 0
2d "	5 a 7	Beans, bush,	1 50 a 1 75
Lamb,	8 a 10	Peas, bush,	0 00 a 0 00
Veal, lb.	7 a 10	Potatoes, barrel,	
Pigs, roasting,	1 00 a 1 25	New,	1 00 a 2 00
Chickens, pair,	75 a 1 25	Common,	0 00 a 0 00
Turkeys,	75 a 1 25	SEED—RETAIL.	
Geese, mongrel,	1 25 a 1 50	Clover, North, lb.	10 a 12
Pigeons, dozen,	75 a 1 00	Southern,	8 a 9
Pork, per 100 lbs.	5 00 a 6 00	White Dutch,	25
Lard, best, pr. 100 lbs.	9 00 a 10 00	Lucerne, or French,	33
Western, keg,	8 00 a 8 50	Herdgrass, bush 3 25 a 3 50	
Butter, lump, lb.	23 a 26	Red Top, bush,	
do. firkin,	15 a 18	Northern,	1 25 a
Cheese, new milk,	7 a 9	Southern,	63 a 88
do. four meal,	5 a 6	Orchard Grass,	a 2 50
Eggs, doz.	— a 15	Fowl Meadow,	2 50 a

BUGS ON VINES. Having been much annoyed the present as well as past seasons, by the operations of bugs upon squashes, cucumbers, melons, &c, I mention a fact that has come under my observation, for the benefit of those who will take the trouble to make the experiment. About the hills containing the seeds, at the time of planting, were set eight or ten onions. These grew with the growth of the plants. The plants are now vigorous and fair, and have not been disturbed at all by any insect. This was the purpose for which the onions were set out; and the effect, the present season, has been as desired. The onions are in condition to produce seed, without prejudice to the other crop. Possibly the experiment may be worthy the attention of those who would avoid the trouble of planting their seeds several times over.—*Boston Cultivator.*

RELIEF FOR TOOTH ACHE. The following recipe for this painful disease is taken from the Hartford Courant. "Some years since I found the following recipe in a highly popular dental work, and having used it with the most gratifying success, from that time to the present, in common cases of tooth-ache, it strikes me I may be instrumental in relieving some suffering by making it public.

Take Sulphuric Ether	2 oz.
Pulverized Gum Camphor	2 drachms.
do. do. Alum	2 do.

Mix well and keep tightly corked. Wet a little cotton or lint with the mixture and apply to the seat of pain. The above quantity can be obtained of any druggist for 10 or 12 cents.

This preparation has been simply the result of scientific investigation. H. PRESTON, Dentist."

GOOD RURAL HABIT. A Spanish peasant, when he eats a good apple, pear, peach, or any other fruit, in a forest, or by the road-side, plants the seed, and hence it is that the woodlands and road-side of Spain have more fruit in and along them than those of any other country.—*Southern Planter.*

COMPOSITION OF CORN. Starch 28,10; nitrogenized matter, 4,80; fat matter (oil.) 35,60; coloring matter, 0,90; cellular tissue, 20,00; dextrine, 2,00; various salts, 7,20; loss, 180. 1000 00.

No other grain is so well adapted for fattening animals as Indian corn, and by grain driers preserving it from the effects of sea voyages, we may expect that grain will yet be shipped in large quantities to England, for the fattening of their cattle, as they now appreciate its value.—*Scientific American.*

BEAT THIS WHO CAN. Mr. John Marsh, of this town, has a cow which gave the first week of the present month, 306 pounds of milk, from which was made 15 pounds of butter. We saw a sample of the butter, and pronounced it of superior flavor and color. Mr. Marsh informs us that the cow has been kept on common feed, and is about eight years old.—*Danvers Courier.*

The Marmots are agriculturists. They cut down grass and make it into hay.

Domestic Economy.

BITS OF BREAD. First learn to make good bread, and the loaves of a good shape; then avoid cutting while warm, if possible, (and this should always be possible;) cut up no more than will probably be eaten, better send to the pantry twice than have a quantity to dry; and last, but not least important, teach children to take no more than they are quite sure they will need, remembering—"Just as the twig is bent, the tree's inclined." Some trees seem not to have been bent by this rule when twigs. But, in spite of caution, some bits will accumulate. The best can be made into toasts, either dry or moist, for breakfast; others into a pudding for dinner; or, soaked thoroughly, and mixed with a little flour, &c., they make excellent griddle cakes; while the remainder, seemingly good for nothing, can be browned and made coffee of; a dish very agreeable to children when milk is not abundant.

Flour that has been packed should always be sifted. It makes lighter bread, and raises quicker.

The bottom crust of bread is often unpalatable from a taste imparted to it by the pans in which it is baked. These should never be rusty tin, or any thing rough, so as to require much greasing. Indeed the better way is to keep the bread pans so smooth, by careful washing, as to need only sprinkling over with flour.

APPLES. Baked apples are greatly improved by being baked in bright tin or earthen plates, with a little water in, and a small quantity of sugar sprinkled over them. To our eating they are quite as pleasant as common apple sauce, and very much less labor is required in their preparation.

ENGLISH PIE. A very excellent Pie for dinner can be made by taking almost any kind of fruit—apples, peaches, pears, cherries, currents, blackberries, huckleberries, &c., filling a deep dish with them, seasoning moderately, and covering with a thick crust. Eat with some kind of sauce, sour sauce is best, butter alone relishes well with them.—*Ohio Cultivator.*

TO PICKLE ONIONS. Peel, and boil in milk and water ten minutes, drain off the milk and water, and pour scalding spiced vinegar on them.—*Miss Beecher.*

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy,	- - - -	50 cents.
5 copies, sent to one address,	- - - -	2 00
10 " " " "	- - - -	3 00
16 " " " "	- - - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL.

Vol. II.

WINDSOR, VT., OCTOBER, 1848.

No. 6.

STATE EDUCATIONAL CONVENTION.

In June last, a Circular signed by the State Superintendent of Common Schools and other friends of Education, was issued, inviting persons interested to meet in Convention at Chelsea. The Convention was held accordingly, and the proceedings ordered to be published, as follows:—

CHELSEA, TUESDAY, AUG. 22.

The State Educational Convention, according to appointment, met at the Methodist Chapel at 1 o'clock, P. M., and was called to order by J. K. COLBY.

On motion, JOSEPH P. FAIRBANKS was called to the chair, and a committee of three, consisting of Messrs. PERRY, HALL, and J. G. HALE, appointed to nominate permanent officers for the Convention. The committee, after consultation, reported for

President,

HORACE EATON.

Vice Presidents,

JASON STEELE, J. P. FAIRBANKS.

Secretaries,

N. BISHOP, J. K. COLBY.

This report was accepted, and the nominations confirmed. In the absence of Gov. EATON, Mr. STEELE presided, and called upon Rev. Mr. PERRY to open the deliberations of the Convention with prayer; after which the Rev. ADDISON BROWN was introduced to the Convention, and delivered an address upon the "Nature and Means of Education."

DISCUSSION ON COMMON SCHOOL STUDIES.

A Discussion then followed upon the Questions: What are the proper studies for Common Schools—their proper order—and the modes of teaching them?

Mr. Mc ELLIGOTT of New York, on being called upon, addressed the Convention upon the importance of a more exclusive and thorough study of the English Language. In obtaining this knowledge, Mr. Mc E. said, let us come to the work of teaching the forms of words, or, in common parlance, the spelling. You all know the usual method. Take a book, whose pages are filled with columns of words, and give out, in suitable parcels, these words to be, by the pupils, committed to memory, that is, so learned, that, when called out to recite, each one can give the letters and the order in which they stand, of any word pronounced by the teacher. The appeal, you see, is all the while to the *ear*. It is forgotten that spelling is a thing of *sight*, not a thing of *sound*. We all spell alike, nearly, when we are *talking*. It is only when we are *writing* that our bad or good spelling is dis-

covered. Hence I think I see, in this perpetual appeal to the wrong organ,—the *ear*, in teaching spelling, a very sufficient reason why, after all our pains, we have so many bad spellers. There is, in multitudes of words, no sort of coincidence between the form and the sound, and we *must*, if we would ever effectually teach the former, rely mainly on the *eye*. We must have regular, frequent, and long-continued exercises in writing out the forms of words. Add to this as much of the *oral* exercise as is convenient; but make it subsidiary. There is special need here, if any where, of using one's eyes.

The next thing—the most important thing, is to get the significations of words. The *sound* is something, the *form* is something; but the *sense* is every thing, almost. Multitudes of short, easy, every-day words, require no explanation. Their force is *felt* the moment they are uttered. By means of these, we may, and do, often unlock the hidden force of higher and harder terms. Take for example, words like these: Compose, Depose, Expose, Impose, Oppose, which are all of one family. Take all the forms (and there are many of them) containing this element *pose*, (to *put*) and you have, by simply learning the force of the parts prefixed, that is, Com, De, Ex, Im, Op, &c.,—you have at once the true value of each derivative in a whole class. This connection and relationship is a thing easy to be seen, easy to be recollected. Thousands of dark and difficult derivatives, by this simple work of analysis, may be instantly made clear and easy to any one. It may be done, too, without requiring, even in the teacher, any knowledge of other languages. In fact, it sedulously excludes all *foreign* forms. It troubles not the plain, practical teacher of English, and the untaught common school boy, with Greek, Latin, German, and French words, as roots, which neither party can even pronounce correctly.—It deals with the meaning and application of all these varying forms, just as particularly, however, as though the foreign forms were perpetually cited. If the teacher is acquainted with the original words, it may sometimes be well to cite them. But, in general, for the mere English scholar, it is altogether unprofitable.

Dr. CUTTER of Boston, followed, by presenting the claims of Physiology to a place among the studies of our primary schools. The fundamental and important principles of the science, he contended, are on a level with the capacities of the children, and should be taught among the first things.

Mr. OACUTT of Thetford, said: What air, are we to understand by the expression, "Common Schools!"

Does it imply that these are more numerous than other schools? Or does the expression mean schools common to all classes in community—in which the rich and the poor may enjoy equal advantages? Does not the word common, in this connection, mean *primary*, describing schools in which the *elements* of learning are to be taught? If so, I contend that they should be regarded as such. But sir, they are not so regarded, though we have no other schools in which are taught the "lower English branches."

As it seems to me, the community has wrong views of the nature and design of Education, and especially of the object of our common schools. Many seem to regard a school as established for no other purpose than to *impart knowledge*, and they regard that teacher the most competent, who can practice the *pouring in* system with the most success. Now if this idea is correct, there may be consistency in what gentlemen have urged in regard to the multiplication of studies, and in the practice of teachers in our schools. But sir, if this system is not correct, a great mistake has been made, and much evil done to the rising generation. If education has for its *principal* object the *cultivation of mind*, then those studies alone should be selected and taught, which are calculated to secure this object. If our common schools are designed to furnish the pupil with the means of acquiring knowledge, then the *elementary* branches should be taught to the exclusion of every thing else that would interfere with thorough instruction in these. By the elementary branches, I mean, as has been said, *Reading, Writing, and Arithmetic*.

These, Mr. President, I regard as of *paramount* importance. There can be no substitute for them.—Let these be thoroughly and correctly taught, and our common schools will accomplish the greatest possible amount of good. I would not be understood to say, that the teacher should in no case, aim to impart knowledge. Indeed, it would be impossible to teach the primary branches *correctly*, without imparting much useful information. Much depends upon the *manner* of teaching.

Gentlemen have contended here, that Geography, History, and Physiology must be taught in our common schools, because these are important branches, and many of our children cannot acquire them elsewhere. I would not object to the formation of classes in these, if the teacher can have time to spare, from the elementary branches. I have no objections to the higher English branches, the classics and the studies preparatory to professional life. They are all important, and may be safely introduced into our *common* schools; provided competent teachers can have time to devote to such classes. But the presumption is that *there is not time* in our schools. I must insist that our primary schools, so far as they are to be regarded as such, should confine their instruction to Reading, Writing, and Arithmetic, and those who study other branches should be regarded as occupying a higher department, and be furnished with other teachers.

Let Reading be taught correctly, and much information upon the various subjects which have been mentioned, will of necessity be imparted. The pupil must have a correct knowledge of elementary sounds,

words, inflections, accent, emphasis, tone, &c., &c. And this is not all. He must understand the sentiment and idea of each sentence. This implies a thorough knowledge of the laws of English Grammar, and of the English Language. He must also understand the Geography, History, Botany, Geology, Chemistry, Philosophy, and Physiology of each lesson in Reading. All this is indispensable to a good reader.

I would have the teacher associate an idea with every element used, and impart some information at every step of instruction. Thus the pupil may acquire much useful information, incidentally, without turning aside from the main object before him. By learning to write, the pupil acquires the art of communicating his thoughts to other minds. Not merely penmanship is meant by this, but the art of English composition. He must learn to use his own language correctly, in communicating his own thoughts.

Arithmetic is the art of computing by numbers. It embraces addition and subtraction, in their various applications, and should be thoroughly taught in our district schools.

Mr. President, how many in our Schools, Academies, and Colleges can read, write, and calculate as well as school children should understand these branches? Is there not an alarming deficiency, particularly in Reading, in many cases? And may not a multiplicity of studies in primary schools and bad early instruction, be among the most fruitful causes of this deficiency?

Let our teachers aim to teach a few things *well*.—Let them teach their pupils to apply themselves patiently and perseveringly to whatever is before them, and the time is not far distant when our school children will be able to do what few in our Academies, Colleges, and Seminaries ever learned to do; viz. to *THINK*.

Mr. HOWARD of Thetford, said he did not intend to occupy long the attention of the Convention, as he saw other gentlemen present who had been invited to speak upon this subject by the provisional committee. He would, however, say a few words.

He had heard of an old man, who declared that Education consisted of three R's, *READING, RITING, (writing) and RITHMETIC, (Arithmetic)*. The old gentleman had *evidently* overlooked *SPELLING*. But with this addition to his list of studies, his idea of what constituted a good, substantial, common education, was not, after all, so defective as might at first view appear. There is a disposition to crowd too many studies into the common schools. Some seem to think that almost every thing should be taught in them, from the Alphabet to Astronomy. He condemned this course very strongly, as calculated to render scholars miserably superficial. The Germans have a maxim that "*Nothing is so prolific as a little, well known.*" This maxim contains an educational truth of the highest practical importance. The true secret of going through a *great deal*, is to take just one thing at a time, and not leave it until it is fully understood. When the mind fully and strongly grasps an idea, it acquires new confidence and power, and

will work more vigorously. One clear thought, which a child can, as it were, take up and look at on all its sides, is worth a thousand indistinct and shadowy impressions. One clear thought will suggest another. It will form a nucleus, around which other thoughts will cluster. Some of the wisest and shrewdest men he had ever met with, were not men of large acquirements. Their knowledge might be *limited*, but it was *accurate*. What they knew, they knew *thoroughly*; what they saw, they saw *clearly*. *Teach much, but not many things*, is a good motto for teachers. So scholars should be more ambitious to go over a little, *thoroughly*, than a wider field, *superficially*. If in our common schools, all that may properly be included under the heads of Reading, Writing, and Arithmetic, should be *thoroughly mastered*, the scholars would be better educated—better fitted for the duties of life, than many who leave our Colleges. It is worse than folly to crowd into these schools what are called the higher branches, while the pupils in them do not know how to cross a "t" or dot an "i" or place a capital or a comma where it belongs. There was a place for everything, and everything should be kept in its place. Colleges, Academies, and Common Schools should occupy their appropriate places. The higher branches should be left to the higher Seminaries. In the common schools should be taught mainly the common branches. These are the foundation stones, on which the temple of knowledge is to be erected. The great object of common schools should be to prepare the child for self-education—to teach him *how* to learn, —to give him the *implements* by which knowledge is acquired, and teach him *how* to use them,—in a single word, it is not so much to teach the scholar *what* to think as *how* to think.

He was therefore entirely opposed to multiplying, as many do, the studies in the common schools. He regarded it as the direct way to injure and embarrass them. It was sure to induce habits of superficiality in the scholars, and increase the already too large class of those who seem to be desirous of *looking* into everything, and *seeing* into nothing.

At the close of the session a committee consisting of Messrs. Orcutt, Spaulding, and Forbes was appointed, to report on the subject. The report prepared by the committee was not presented to the Convention.

Adjourned to meet at 7 o'clock.

EVENING SESSION.

7 o'clock. Met according to adjournment.

The subject under discussion at the adjournment was resumed.

DISCUSSION ON SCHOOL STUDIES—Continued.

Rev. M. TAYLOR of Chittenden, said that *Reading* should be the first subject attended to in common schools; but soon the attention of children may be directed to mental Arithmetic, the outlines of Geography, the Pauses. English Grammar should not be attended to till the scholar has attained a good degree of mental discipline, and then, with a good teacher, in three months he will gain a better knowledge of English Grammar than he will in the common way in six years. Mr. T. was in favor of introducing the

higher branches into our common schools, as *many* children must receive *all* their education in these schools; though in large schools, or when there are many small scholars, the common branches should receive the first and chief attention.

[At the close of Mr. Taylor's remarks an address was delivered by Mr. Wm. D. SWAN of Boston. The subject designated in the published order of exercises, viz: Is sufficient attention paid to manners and morals in our schools? having been laid upon the table, the subject under discussion in the afternoon was resumed.]

Mr. NORTEND of Salem, being called upon, said, the prevailing tendency of the times is to introduce too many studies. Scholars are more ready to pursue many studies than they are to acquit themselves thoroughly in a few, and parents and teachers are too willing to gratify youth in their desire to attend to a multitude of studies. I would have pupils aim to study understandingly, rather than to attend, superficially, to many branches. I would have the elementary studies regarded as of the first importance; they constitute the ground work,—the foundation upon which the superstructure is to rest; and if the foundation is defective, all that rests upon it must suffer.

As to the order of the studies, I would have reading and spelling the first; they may be commenced almost at the same time and at an early period. In spelling I would combine the oral and written methods, and would give much attention to the latter. It is a wrong impression that the written mode can be pursued only by advanced schools and older pupils. It may be practiced by very young children,—almost as soon as they can commence oral spelling. With older pupils I would give the written method the predominance. I would not only require scholars to write words, but also sentences or stanzas,—the same having been slowly and distinctly repeated by the teacher. I have often noticed that pupils were extremely deficient in spelling names of individuals and places, and would therefore recommend teachers to require scholars to write the names of their school-mates, the names of towns, counties, states, &c.

In oral spelling, I would never allow a pupil to try twice upon the same word, nor would I repeat a word after it has been once distinctly pronounced.

Mental Arithmetic may be commenced at an early age, and though one of the first studies to be commenced, it should be one of the last to be discontinued. It is hardly possible to give too much prominence to mental arithmetic, for minds well disciplined by this are much better fitted for advancement in all other branches. In recitations in mental arithmetic, if the questions are not too long, I would have scholars recite without looking upon the book, and I would require a thorough and clear explanation of every question.

Geography and map drawing may be commenced at an early age. Some teachers allow their pupils to recite lessons from an open atlas; I should object to this, and can see no advantage resulting from it. I would in all branches assign lessons of proper length and require them to be thoroughly committed. I

would constantly keep in view the importance of doing *well*, rather than *much*, as a little *well* done is better than much but half done.

Written Arithmetic may be commenced at an early age; and in this much use may be made of the black-board. I would have much time and attention given to the first principles. Scholars should be required frequently and for a long time to perform exercises in addition, multiplication, subtraction, and division, as in these frequent practice is desirable. Let the teacher often give examples to a whole school or class and he will see rapid improvement. If teachers would spend a few minutes, daily, in assigning miscellaneous questions, (not from any book) much good would result.

The study of Grammar, as a regular exercise, I would not introduce into the younger classes in schools. Pupils often acquire an unconquerable dislike of Grammar by being required to study it before they are old enough to understand it. The skilful and judicious instructor may do much towards teaching grammar, orally, and in such way as not to dishearten the scholar. By right management, children may acquire much real knowledge of this branch before they ever open a text book on the subject. The method of oral instruction contained in the excellent Grammar of Wells may be of value to teachers as a suggestive plan.

In conducting all recitations I would recommend that scholars should not be, generally, called upon in the order in which they sit. The question should be given to the whole class, and then some one should be designated to answer, or explain it. This course will secure attention and will also render the studying of *particular* passages or questions, of little value in any respect.

Voted, That to-morrow at 9 o'clock, the Convention attend to an address by Mr. NORTHEND, and at 11 o'clock, one from Rev. Mr. RANNEY of Dover.

Adjourned to meet to-morrow at 8 o'clock.

WEDNESDAY, AUG. 23.

MORNING SESSION.

The Convention was called to order according to adjournment; Prayer by Rev. J. ADAMS of Sharon.

On motion, Messrs. Taylor, Howard, and Fairbanks were appointed a committee to nominate a committee to report on the expediency of holding a Convention similar to the present one, annually.

Messrs. Brown, Drake, and Colby were appointed a committee to prepare resolutions to be presented to the Convention.

Voted, That the various gentlemen who address this Convention, be requested to furnish an abstract of their remarks for publication.

Rev. J. ADAMS was appointed assistant Secretary. The hour of 9 o'clock having arrived, the Convention listened to an address by Mr. NORTHEND of Salem.

DISCUSSION ON SCHOOL HOUSES.

The discussion of the subject of School Houses was introduced by Dr. WORCESTER of Thetford. Dr. W. said:—

The situation of the school house should be pleasant, attractive, healthful, somewhat retired, so as to

be out of the bustle and confusion and dust of a public street. It should not be situated in a frug pond, nor where the air is liable to be contaminated with offensive effluvia from any source, neither should it be placed in the side of a hot and barren sand bank. It should not be so remote from any part of the district that scholars will be obliged to enter school exhausted by a long walk under a burning sun in summer, or through the drifts in winter.

There should be ample play grounds about the house, surrounded by a high and tight fence, and ornamented with trees, shrubs, and perennial flowers.

The house itself should be large enough to give ample room for all the students so that there may be no crowding. The walls should be *high*, so that there may be a good supply of air, independently of ventilation. Every part of the room should be tight, so that no air may be admitted except when it is desired to have it enter. It should in all cases be furnished with a good ventilator, that the impure air within may be readily exchanged for fresh air from without. This fresh air should be admitted at the bottom of the room, as was remarked last evening by Mr. SWAN; not, however, as it is in many of our school houses, through cracks of no inconsiderable dimensions in every part of the floor, but through an opening made for the purpose, communicating freely with the external atmosphere.

The ordinary modes of ventilating by raising windows and by dropping them from the top are both objectionable, as both will frequently give rise to partial currents of cold air, which greatly endanger the health of the scholars. Of the two methods, dropping from the top is preferable, but there is "a more excellent way" than either.

The importance of ventilation can hardly be over-estimated. Where it is neglected, both teachers and scholars soon become, as a matter of necessity, to a greater or less extent, dull, sleepy, inefficient; every way unfitted to perform well the duties of the school room. Comfort is gone. The health suffers greatly, often irreparably. If our school houses were well ventilated, many districts I am satisfied would save much more in one year, in doctors' bills alone, than the whole cost of the ventilating apparatus.

The air which enters the school room should in winter always be heated either as it enters, or what is better, *before* it enters. In this way the currents of cold air which ordinarily circulate about the feet, to the great discomfort of the scholar, and often to the serious injury of his health, would be avoided, as would also, to a considerable extent, the unequal heating of parts of the room near to and remote from the stove, which is such a source of discomfort both to teacher and scholar. The temperature should be regulated by a thermometer, so that it may be uniform. The walls of the room should be so constructed, either by making them enclose a space filled with confined air, or in some other way, that heat will not be readily transmitted through them; that the room may be warm in winter and cool in summer.

The seats should be made as comfortable as possible, and there should be a good support for the back. This is a matter of very great moment. Many a case

of spinal curvature originates in the hard, narrow and every way uncomfortable benches of the school room. In my view, benches should be altogether discarded, and good school chairs should take their place.

At the hour of 11, an address was delivered by Rev. D. H. RANNEY of Dover.

Adjourned to 2½ o'clock.

AFTERNOON SESSION.

Convention met according to adjournment. Governor EATON expressed to the Convention his regret at being prevented by illness from preparing anything but an abstract of an address. The abstract however he proceeded to read.

DISCUSSION ON QUALIFICATIONS OF TEACHERS.

At the close of the address, the Convention proceeded to the Discussion; "Defects in the qualifications of teachers. What are the best and most available means for securing a competent number of well qualified teachers to meet the exigencies of the State?"

Mr. C. G. BURNHAM of Danville, said:—

MR. CHAIRMAN: Fortunately for my subject, one or two of its important divisions have fallen into abler hands and have already been pretty fully discussed. I will add a single fact in favor of teaching children to read by the sounds of the letters. A little daughter of my own, about five years of age, at her own solicitation, commenced attending school. I permitted her teacher to make the experiment of teaching her to read by putting her first into easy lessons and teaching her the words. Not being anxious that she should make rapid progress, I paid little attention to her, excepting to hear her read occasionally a lesson of her own selection. This course was pursued about two terms. I requested her, one day, to come and let me hear her read. She came with great cheerfulness—selected a chapter from the New Testament and read it fluently. She selected other portions and read them with equal facility. I was delighted with her progress, and bestowed upon her, from my pocket, some little token of approbation. She returned again to her sport. On reflection, I did not feel quite satisfied with the examination which I had made of her proficiency. I called her to read again. I selected the lesson this time, but most unfortunately for her, she could not read a word—she could not spell and pronounce a syllable of two letters. She felt her inability,—her countenance fell, and the big tear started. To a man this would be but the emblem of things that are; to the child, it was in a single hour, the extreme of fortune met. I comforted her by promising to take her into my own room and to teach her to read. I did so, and commenced with the sounds of the letters. She knew their names, and when she had learned to apply the name to the sound, I would spell a short word or syllable by the elementary sounds of the letters, and require her to name the letter sounded. I would then combine the sounds of the letters, and request her to pronounce the syllable or word. This she could soon do, and in a single week could read quite well. Thus, one week, in the one mode, accomplished what six months did not, in the other. But two years have not undone all the evil.

In regard to spelling, different modes have been dis-

cussed, but no allusion has been made to the manner of spelling single words. This I deem important. The common fault is, to spell the word without pronouncing the syllables by themselves. The tendency of this practice is to make blundering readers. Every syllable should be pronounced when spelled and repeated with the preceding syllable or syllables. This is necessary to a correct and ready pronunciation of words. It is also important as a habit of doing things rightly. Cicero says, "Whatever is worth doing at all, is worth doing well." I know of no way of arriving at eminence in any art, but by the slow process of doing one thing at a time, and finishing that before you take another. I cannot understand how we are to arrive at a knowledge of the whole while ignorant of the parts. The skillful performer on an instrument of music,—the individual who at a glance can pronounce a long and difficult word, arrived at this power by the slow process of doing one thing at a time. He who undertakes to practice what he does not know, can never be a proficient. There is one mode of teaching spelling, which I have practiced, when I have had the opportunity of teaching a child his first reading lessons. I believe that a child should learn to spell and read at the same time,—that his first reading lessons should be his first spelling lessons. Let a child understand that every word he reads is to be spelled, and he forms the habit of noticing, when he reads, how words are spelled, and one would be surprised to find that very soon, a child will spell every word in his reading lesson, without devoting any extra time to the exercise. I have in my mind several instances of young men, who, from the time they commenced their A B C, never devoted an hour, aside from their reading lesson, to the exercise of spelling, and yet can spell as correctly as most who have devoted half their school hours to this exercise alone.

There are also some defects in the manner of teaching arithmetic. Mathematics is an abstract science, calculated to improve the reflective faculties, and as such it should be studied. The fault in teaching it has been, especially mental arithmetic, to present to the eye, lines and balls and images of all descriptions to aid the calculation of the pupil. It may facilitate the operation, or even aid in the conception of truth, but the tendency is to preclude reflection, for when the child sees that a thing is so, he does not always inquire how, or by what process it became so. The effort should be to direct the thoughts inward, to unfold to the child its own mental process, its own method of arriving at truth. And how is this to be done? Obviously, by beginning where the child began, and proceeding as the child proceeded. And where did the child begin? Doubtless, with unity. This is the first idea conceived by the immortal mind. The eye opens upon the external world, an object passes before it; a thought is awakened, an idea conceived;—it is of unity. Another, and another object passes, each exciting the idea of unity, and in addition, of individuality and succession. The mind now has material for reflection, and comparison and contrast follow; then analysis and synthesis. The mind thus excited and put in motion, reels not day nor

night, but verges on toward the Author of its being. And how beautiful the thought, that the first idea conceived in the infant mind should be that of unity. A God in unity. There are Three that bear record in heaven, distinct in personality yet a mysterious unity.

I said that instruction should begin when the child begins to think; accordingly, I have adopted a method like the following:—

T. John, can you count?

S. I can.

T. Let me hear you.

S. One, two, three, &c.

T. Very well. How many are one and one?

S. Two.

T. How many more than one are two?

S. One.

T. How do you know?

S. I know because one and one are two, therefore two is one more than one.

This method, or something similar, I have found to be exceedingly pleasing to children. I will not dwell longer upon it, but proceed to another division of the subject.

The teaching of morality. I mean that morality which is based on love to God and love to man. The first clause of the definition would, perhaps, embrace it, for he who loves God, will love God's workmanship,—and man made in the image of God. There has been of late years a sad neglect of man's moral nature. The development of his moral faculties has not kept pace with his intellectual. They have traveled "haud equis passibus," not with equal steps.—It is the great object of education to develop all the faculties of man, moral, intellectual and physical, in harmonious proportions. It is then only that man accomplishes the great end of his being—the glory of Him that made him. "For thy pleasure they are and they were created." How important then, that the love of justice, goodness, and truth, should be early inculcated. That the improvement of our moral nature should take the lead in all our efforts at human improvement. I cannot pursue the subject in its details. Morality, in the sense I use it, like the atmosphere, which pervades heaven and earth, ocean, rock and cavern, diffuses itself through all the relations of life:—the relations of man to man,—of man to earth and man to heaven. The work of education therefore becomes a work of vast magnitude and importance.—Who would not engage in it? Who would consent that those who come after him should not be more intelligent, more useful, than himself? There is not an intelligent man that lives whose heart would not be saddened to know that his children would not be better and happier than himself? It is often the consolation of the most worthless, that their children are more respectable than themselves. And who is more humble than the truly great? more conscious of ignorance than the wise? Who does not feel, in view of what he might have accomplished, and what he might have been, had he seasonably apprehended the end of his existence, that life has been a failure? How little effort have the best of us made to expand the power

of thought! How little do we retain of what has been taught us! How little has become part and parcel of ourselves! Most of our acquisitions, like the garment of Job, hang loosely about us. When we consider what education can do for man, and how little it has done, we feel that even now, we are in the trough of life's ocean, while above, high above us, is that pendant wave, upon whose top we ought to-day to be honoring God and diffusing good to man. It is true a very laudable effort has been made to prepare reading books calculated to awaken the moral sense.—But lightning does not frighten children unless they hear the thunder. Thunder is the voice of God.—Neither does the reading of moral lessons affect the scholar, often, unless enforced by the voice of the teacher. The voice of the teacher is the voice of God to impress moral truth upon the mind of the child.

But it may be asked, How are the defects to be removed, and the necessary qualifications secured? I answer, we are to obtain the right kind of a teacher on the same principle that we obtain any other article of specific properties. Prescribe the qualifications, and offer an equivalent. But it is said, the qualifications are prescribed by one class of citizens, and the equivalent is offered by another. Very true, so is the quality of flour in the hands of one class of citizens and the equivalent in another, but then regulate the quality and you regulate the price. So in regard to teachers. Let certain qualifications be required, and the number would be diminished, and the demand increased, and consequently the price would be raised. I cannot conceive it necessary to introduce any new principle to make our Common Schools all that we desire. The principle is recognized every day in common life. We can obtain any article we wish on this condition alone, viz: that we offer an equivalent. Any man can be had as a Common School teacher, on this ground. President Polk, if you please, after the 4th of March next, can be had for a "quid pro quo."

Mr. Mc ELLIGOTT of New York, :—

I have listened, Mr. President, with every attention to the observations of the gentleman (Mr. Burnham) last up, as also to those of many others who have been pleased, on this floor, to favor us with the results of their experience in the school room. I have been both edified and gratified. But, sir, when I contemplate the high, nay, sir, the almost superhuman standard of excellence, which in our lectures and discussions thus far, we have assumed as that according to which the character, physical, moral, intellectual, literary, and scientific, of every common school teacher is to be adjusted, I confess I am at a loss to find many men who will in any wise answer the description.—Who of all of us, sir, being judged by this standard, will be able to stand? Well versed in all the branches to be taught, profoundly skilled in all the arts of government and instruction, sound in morals, and polished in manners, at once a scholar, an artist, a gentleman, and a moralist,—the common school teacher here set forth and demanded, is a man, compared to whom the great body of our teachers in New York

and New England, it seems to me, would appear to be but half-educated, as they certainly are but half paid. To all these high demands, it might, with all truth, have been added, in order to complete the picture, that the teacher must have derived from nature antecedently to all artificial training, that prime requisite of the office—the ready ability to govern and to impart. For, certain I am, sir, that the maxim *Poeta nascitur, non fit*, (A Poet is born such, not made,) is quite as true of a teacher as of a poet. It is one thing to be a ready recipient of knowledge; it is quite another thing to become a skillful dispenser of the same.

And now, sir, taking this high and hard ground in reference to the constitution of the teacher's character—leaving the demand without limitation or restriction, as we have been doing all along in our debates and deliberations, I ask whether something more is not required than mere preparatory training in schools, Institutes, and Conventions, to get fit minds for teachers into our common schools, and to keep them there. Will tact, talent, and taste, submit to the toil and drudgery of complete preparation, and the wasting work of the school room, only to meet the privations and mortifications of pitiful prices and paltry social standing? If he is not to be miserly, so is he not to be miserable. In the just work of his profession, he must find a suitable, that is, a decent support; if he does not, all efforts to keep our common schools supplied with good teachers will be worse than useless.

MR. GREENLEAF of Brooklyn, N. Y.:—

I rise, Mr. President, because I cannot, under the circumstances, keep down. I am somewhat acquainted with teachers both in New England and in New York, and am very far from believing with the gentleman from New York, that, as a body, they are neither half educated nor half paid. I have just returned from a meeting of the American Institute of Instruction at Bangor, in Maine, where I met with men of as fair talents and those too who are in the receipt of as fair incomes as are usual in other professions.

In many places the teacher, the educator, is the leading man. In Rhode Island, for example, the highest state salary paid, is, I believe, for education. Mr. Bishop, the excellent superintendent of schools in Providence, receives a higher salary than the Governor of the State, and the Governor in passing always takes off his hat to the inspector, as the greater man, the people having so decided. That the compensation of teachers is in all cases sufficient, I by no means believe, but many who receive small salaries, receive quite as much as they earn. Many are mere apprentices, and know nothing of their business, or as much as I do of mowing, while I have never swung a scythe in my life. If by one dollar a day the gentleman means \$365 per annum, I am free to say that in my belief it is quite as much as most of us earned at the beginning,—while I am equally free to confess that the only way to retain distinguished talent, in any sphere, is by suitably rewarding it.

And allow me to add, Mr. President, that on entering this Convention, I was struck with the moral and intellectual power here manifest. If there were gi-

ants here formerly, the race is not extinct; for the gentlemen here assembled, can, if they choose, move the State, from the river to the lakes. A similar combination of talent I have seen in other Conventions.

MR. MC ELLIGOTT:—

The gentleman altogether misapprehends my meaning. I have not said, that the teachers of New York and New England are but half educated; but that compared with the almost superhuman standard here set up in our deliberations, they would appear to be but half educated. I deny not that some, nay, sir, even many teachers get fair incomes. The gentleman, however, seems not to be aware of the less fortunate condition of some, who, with equally fair talents, perchance, are toiling in unrequited obscurity amid, it may be, these fertile hills and valleys of Vermont.

As to the case of the well paid superintendent, perhaps it is enough to say, in this place, that I am talking about teachers' pay, not that of superintendents. That the Governor should get a small salary, is a thing that finds its ample compensation in the circumstance, that honor, influence, and high social and political standing, are often advantages far more valuable than a few hundred dollars. Not every man can afford to be a Governor.

MR. STEVENS of Johnson:—

MR. PRESIDENT: I suppose, sir, that the question contemplates, mainly, if not wholly, the defects in the qualifications of common school teachers. That there are defects in their qualifications, is justly inferred from the character of the schools. But that these defects are confined exclusively to the teachers of the common schools, is indeed questionable. For who, I ask, are responsible for the qualifications of these teachers? Are they mostly trained in the primary schools, or do they avail themselves of the privileges of the higher institutions of learning, and from thence go forth with that ability and fitness which should be their passport? Do they not, sir, go forth and teach, in some respects, as they have been taught? It has been said with some truthfulness, that that teacher is not worthy the name, who has not left his mark upon his pupil.

The teachers of the primary schools are all marked. But I will not take time to discuss the various ways by which this has effected, but prefer, rather, to submit some views, that have had their origin, in part, from a sense of the teacher's failures.

The teacher, commonly, is regarded as the expositor of all that which is intricate in study; and consequently, it is his business to simplify and elucidate every difficulty, so that the learner can, with some degree of certainty, pass on to the next. Hence, not unfrequently that teacher is unjustly held in high repute, who by skill or tact acquires a celebrity for making study plain and easy. But to teach right—to conduct the pupil through all the successive stages of mental discipline, arranging his studies and establishing his habits, and finally growing him up strong and vigorous minded, is a subject of serious consideration.—Teachers may differ in their modes of educating, and

their theories may all be well enough, but it is their *practice* which is so faulty and defective. In theory, they say that the child at its birth has every element under proper discipline requisite for a strong mind; and that education is "to unfold and direct aright" these powers. But in *practice*, on the contrary, they disregard theory, in this respect, allowing *circumstances*, so to speak, to take the direction. A systematic arrangement of study, necessary for the steady and equal development of the intellect, is *almost wholly fortuitous*. Again, in theory, they would have a new interest created, day by day, with the pupil, even from his first entrance into the school room. And too, in all the studies of the course, have every lesson most fully committed—but in committing these lessons to memory, so to commit them, that the reasoning powers of the pupil shall be brought into exercise thereby, early cultivating a will to look to the bottom in all investigations. In practice, however, they have no *systematic arrangement* of study, nor do they seek it, for it is useless and vain, say they, to adopt what cannot be practiced and carried out,—thus they content themselves in delegating to the parent, and at a very early age to the pupil, the business of selecting and pursuing, at least up to his 18th year, the six branches of study now within the pale of the statute.

Of the *progress* during this period, and the kind of *development* of which the pupil is possessed, it is unnecessary here to speak. In practice, too, they push their pupils through the same text books *many times*—but whether they are any better prepared to go through once, can be no question with the instructor, who labors long and patiently to break up this deathly habit of estimating mental culture or acquiring *real and substantial* knowledge by the books gone through during any one term of school. Finally, in theory they would grow up all their pupils to do their own work—they would teach them how to study, and would early inculcate the feeling that every pupil has, mentally, the same ability to master his task, as he has, physically, any proper work; and further, when he comes to his book, to go to work in that same systematic and determined way, as does the industrious and calculating laborer, in his daily toils. If obstacles arise, and though he may fail in the first, second, or third unsatisfactory effort, yet, nerved by the unflinching determination of success, he continues for hours, even, to struggle, till he is either the victor, or nearly so, by a mere word from the teacher.

I have thus spoken of the theory and practice of teachers in contra distinction. The one—theory—as meagerly setting forth a system of training, under which it is most desirable for the scholars of our schools to be placed, in order that they may become teachers, not only of thoroughly disciplined minds, but of a full preparedness for directing in the first stages of moral and intellectual growth;—the other—practice—as exhibiting, emphatically, the *no system* of training, under which the teachers, mostly, of our schools have passed; and sir, if it has been correctly set forth, it is *no wonder* that there is a call for higher qualifications.

But to be more explicit—we will venture the asser-

tion, that teachers and scholars are and have been exceedingly unfortunate, under their peculiar mental training—if training it can be called. On the one hand, they have suffered through all their literary course for the want of *system and thoroughness*—while on the other, they have been taught *too much*—their teachers have been too anxious and too particular, in imparting instruction. The former case—the want of system and thoroughness needs no other commentary, than the present state of the common schools. We find scholars connected with them, from their 4th up to their 12th year, equal at least to four years of term time—and from their 12th onward to their 18th, to an amount making in all about six years of constant schooling. And now sir, are those scholars generally accomplished in any one of the six branches of study, in which the teachers of the state are licensed to teach? There is no system or order, in taking up these branches—and there is no thorough, rigid *drilling*, that can be *relied upon* in any of them. If a teacher should be thorough this term, it is a matter of much uncertainty what course his successor may pursue. He may exactly paralyze or undo what has been done the previous term. Not unfrequently we meet with scholars that have passed over or been through English Grammar, Arithmetic, and the like, for six successive winters, or six successive terms of school. I say have been through, because to go through these studies in three months, satisfies the parent, and, too, the scholar, that he has done something. Yes sir, they go through these studies, just as the scythe goes through the grass—the stalks are clipped, but the roots are left undisturbed. They are not positive in the application of scarcely a single principle. They know but little of the genius of language, or the exact science of numbers. The contents of the text books are familiarly known to them—but state a problem, *out of the book*, under any of the rules given—or ask for a demonstration of the rule, and silence, or failure, is the only demonstration.

Out of such a "modus operandi" teachers have sprung, and they go forth, prepared to make thorough work in the same way, as they have been taught.—Under such a state of things, it is not at all surprising, that some, indeed, should even avail themselves of the teachers' aide—if aids they can be considered—i. e. they become the possessors of full and elaborate keys, or perhaps more familiarly known by the classic appellation of *ponies*—yes sir, ponies of intellectual development. The publisher is very exact in doing his duty—like some poisonous drug, he labels them all, expressly saying, that they are *designed for teachers, only*.

Socrates was accustomed to say, that all were sufficiently eloquent in that which they understood. It may be laid down as an axiom, that a teacher cannot teach that which he does not understand. And if he cannot teach without riding a pony, let him, for the common schools' sake, first serve thoroughly as a *footman*, and then we have the fullest confidence that he would be more content in the ranks of *horseman* than *ponyman*. I certainly do not, sir, intend to speak irreverently, but it has seemed to me that these kind of helps are fraught with evil—that they are com-

pletely calculated to blunt and slowly undermine every germ of thoroughness and discipline growing out of all study. It makes the pupil heartless—it makes him lazy. Let every teacher rely upon his own strong arm, and then he will be more likely to train his scholars to walk in the same path.

We said that scholars, and consequently teachers, have suffered for having been *over-taught*. How so? The art of the smith is in knowing when to strike.—The grand secret of marked success in teaching, consists in knowing the exact wants of the scholar, and the exact time for granting him aid, and the kind of aid that he needs. If the teacher says to the pupil, "you must go through your book this term," with lengthy lessons and frequent assistance from his teacher, he will do it. In the same manner, in the higher institutions, may all branches of study be passed through. Take for example, the study of Algebra; should the pupil study upon an intricate and dark problem for two or three hours or days—this depending somewhat upon the character of the problem?—and is it advisable for him thus to continue, if he understands the general principles by which it must be solved? or is it the "more excellent way" to assign several problems at each recitation, and what the pupil cannot solve, the teacher must? If the latter method is pursued, the pupil will pass rapidly on with the work. But, sir, is not Algebra a *practical* study? And wherein is it mainly practical, other than in aiding in the manufacturing of thinkers, and in enabling the pupil to concentrate the powers of his mind, upon any question under consideration, and thus learn to investigate and originate knowledge for himself.

If it is the object of study, to discipline and build up with the pupil, a *strong mind*, there must then of necessity be time for a full investigation of *all topics* of study. Again, the young man who proposes to connect himself as one of the students of a college, usually consults his teacher, as to the amount of study necessary for his admittance. He passes through the prescribed number of text books, in perhaps one or two years, more or less, and considers himself, if he is only *through* these branches, amply fitted for classic halls. He may be fitted, or he may not be fitted. He may early become convinced of his unpreparedness, or he may plod along, satisfying himself that he is all that has been possible for him to be at this stage of discipline. But that crisis which must be formed in the life of every scholar, has not yet been formed in his intellectual being. He has not come to himself. He feels not an ability, or a strength to surmount every opposing obstacle. He understands not that every neglected point in study, disqualifies for the next, and weakens the resolution to *know*, step by step.

Teachers have yet to learn, at least in practice, if not in theory, that one page well understood, affords more real discipline, and advances the scholar more rapidly, than a dozen hastily examined. Not many years since, sir, a young man of 21 years, presented himself for admittance at one of the New-England Colleges,—having been urged to do so by a fellow-

of him in his qualifications. In Latin this young man had read the Latin Reader and four Books in the *Æneid* of Virgil. In Greek, twenty pages of the Greek Reader, but had not attended sufficiently to the Grammar. After the examination, the Professor privately remarked to his Instructor, "Your student can enter. In Latin, his knowledge is *more than* is required—but in Greek he needs to understand, or rather complete the Grammar. However," continued the Professor, "I would rather advise him not to enter this year, for if these few pages will afford *such an exhibition of ripe scholarship*, it is really a pity that he should enter upon his collegiate course, in the *least trammelled*, as I am fully confident that he *must make something*."

But how are the defects in teachers to be remedied? To adopt anything like a rigid course of study and bring every scholar to the work, will disaffect the parents and the scholars; and also in higher Institutions, to make young ladies or gentlemen do their *own work*, or in other words, to throw themselves upon *their own resources*, under the judicious guidance of their teacher,—or advisedly to inform them that they are destitute of scholarlike habits, that they should return and take up some of the *lower branches*, such a step, it is said, the *times will not warrant*. But there are schools, and many of them too, at work upon this plan,—and will work upon this plan, if the school-rooms are likely to become as bare as the trees of winter. However, teachers need not doubt their success upon this platform, or think to become poor for the want of patronage. We would therefore suggest that, as one of the most available means "for securing a competent number of well qualified teachers to meet the exigencies of the state," is to secure to some of our thorough-going higher Institutions, the attendance—if it can be done by any fair means—of at least, some half dozen teachers, from each town of the state, and persuade them to continue at these Institutions till they have established with them the foundation of all good teaching, viz,—correct scholarship. If, sir, we can begin to send out yearly, even but a few rightly and thoroughly disciplined into the different sections of the state, soon there will be, not only a *demand* for such teachers, at an advance on wages, but a stimulus will be presented for higher attainments, and that too, from *necessity*, to those not otherwise persuaded to this course. The wages of the teacher must rise with his qualifications; and cheerfully will he be rewarded by such patrons, as see and know that the genuine laborer is worthy of his hire.

PUBLICATION OF PROCEEDINGS.

On motion, a committee of one from each county represented, was appointed, to take measures to secure the publication of the doings of this Convention.

Committee, Messrs. Fairbanks, Spaulding, Taylor, Ranney, Forbes, Burnham, Howard, and Hall; who subsequently reported that the proceedings, including abstracts of the addresses and discussions, be published in the October number of the School Journal, to occupy, if consistent, the whole number, and to have extra copies printed for gratuitous circulation.

Adjourned to 6 A. M. o'clock.

EVENING SESSION.

Convention met according to adjournment, and listened to an address by Mr. W. A. BURNHAM of Manchester, on the government of schools.

The following gentlemen were appointed a committee to consider the expediency of calling another Convention, and to make arrangements for the same:—R. S. Howard, Hon. H. Eaton, H. Orcutt, J. P. Fairbanks, President Wheeler, Rev. E. L. Scott, Rev. D. Hicks.

Voted, That Gov. Slade have an hour, in which to present the subject of Common School Education at the West.

Adjourned to meet to-morrow at 8 o'clock.

THURSDAY, AUG. 24.

MORNING SESSION.

Convention met according to adjournment. Prayer by Rev. THOMAS HALL.

DISCUSSION ON DEFECTS IN SCHOOLS, &c.

On motion, the subject assigned for discussion the last evening, "What are the prominent defects in our Schools and School System, and what the chief obstacles to the greatest success of our system? How shall they be removed?" was taken up. Mr. J. S. SPAULDING of Bakersfield, addressed the Convention. He thought that one of the greatest defects in our schools, is the want of proper government.

Rev. D. FORBES thought that the prominent defect in our schools, is the want of system. The scholars are divided into classes, but there is no system, as to imparting instruction. A large part of the time of teachers is taken up in imparting instruction to individuals.

To remedy this, teachers should be instructed, and Teachers' Institutes are absolutely necessary. Teachers especially in this State, need this. The schools of teachers in this State who have attended these Institutes, are of a higher character than those who have not enjoyed their advantages. But many young ladies have not the means of attending these Institutes—they have so small a compensation. We must increase this compensation.

Rev. C. TAYLOR considered the root of the difficulty to be erroneous views as to the object and importance of education. Parents regard their children as mere animals, and endeavor to give them such an education as will enable them to take a little better care of the body, instead of educating them as intellectual and moral beings.

As it respects the defects in our schools, the principal difficulty is the laziness of the teachers.

Generally, a teacher can have about as good a school as he pleases.

No matter for his books, or house, or any thing else. With a good share of common sense (the most important of all *sciences* for a teacher) diligence and perseverance, and a little ingenuity, he will have a good school in spite of all difficulties.

Another difficulty respecting our Common Schools is, we find too much fault with them. It is fashiona-

ble to complain of district schools, and therefore every body complains of them, while nine out of ten of those who are loudest in their complaints know nothing as to what the School is, and, if possible, less still as to what it should be.

We have many very good district Schools, and parents often take their children out of the district school and send them to a select school, when the district school is much the best.

Mr. LEACH of Nashua, N. H., thought that the great instrument for removing the obstacles in the way of the improvement of common schools is the Teachers' Institute. This is the feeling in Massachusetts, Rhode Island, and other States. Mr. Mann takes the same view of the subject. The American Institute of Instruction at its late meeting inculcated the same doctrine in regard to these Institutes. Mr. Barnard had excited such an interest in Rhode Island that \$25,000 have been expended by the city of Providence on school houses.

Governor SLADE wanted more said on the subject of the address last evening, viz: "Government of Schools." He deemed this one of the most important subjects that had, or could, come before the Convention.

There are too many teachers who have no other idea of government than that of mere force—a government appealing alone to fear. Of this government the whip is the instrument—made effectual according to the strength of the arm that wields it. Mr. S. said there could be no greater mistake than this. He admitted that there were cases in which the rod must be used. He was far from believing that it could be dispensed with entirely. But those were extreme cases. Punishment should be the "strange work" of the teacher.

The great thing to be aimed at, should be, to induce the child to govern himself. This, said Mr. S., is a point of very great importance, independently of securing obedience and maintaining order in school. As a distinct branch of education, with a reference to the child's future life, the instruction of self-discipline is of an importance that cannot be estimated. What is a man worth in society, and what is society worth, without self-government! Our whole civil structure rests on this principle. But when is self-government to be learned, if it is neglected in early life!

If you cannot make the child govern himself, you will in vain attempt to govern him. You may whip him, and he may seem to be subdued, and yet your point may not be gained. His heart may remain unsubdued still, and ready to resist your authority upon the slightest chance of being able to do it with impunity.

CONSCIENCE, said Mr. S., is the great instrument of self-government; and that teacher is unfit for his or her work, who does not understand this, and is not capable of making a successful appeal to conscience—awakening, and giving activity to this monitor.—There should be but few rules in a school,—the great leading one of which should be—DO RIGHT. Motives of interest and expediency should be seldom, if ever, appealed to; while the great law of *Right* should be

constantly kept before the mind of the scholar.—Paul's injunction is a noble specimen of this: "Children, obey your parents in the Lord, for this is right." He did not say—For this is *expedient*. He had no such sliding rule as this. He thought that children were capable of feeling the force of appeals to conscience; and he thought right, for they are capable of this—far more capable than is generally imagined—far more, indeed, than many and most persons of mature age; and if parents and teachers would universally cultivate the consciences of children, by frequently appealing to their sense of right and wrong, and quickening that sense by a judicious use of Bible instruction, we should see a very different race of men and women—much less deceit, fraud, overreaching, chicanery,—much more openness, uprightness, integrity, and truth.

But there is a right and a wrong way of appealing to the conscience of a child. There is a stern, formal, harsh way of doing it. That is the wrong way. Get the child's *confidence* and *affection*, and you can do almost anything with him. Without it, you can do almost nothing. Love! How ready it is to submit, and obey, and work. Confidence! How it will look up to you, and hang upon your words. Impress the child with an abiding conviction that you love him, and feel a deep sympathy for him, and ardently desire to do him good, and he will cling to you like a brother, and watchfully anticipate all your wishes. It will be his delight to obey you. There are doubtless exceptions; but they are very rare, or rather would be, if all teachers were capable of putting into requisition this powerful instrument of school government.

Much, then, said Mr. S., I had almost said everything, depends upon the manner in which things are done. There should be no harshness—no impatience—no scolding; but a calm, steady, firm self-possession, tempered with kindness—such as shall secure at once the respect and love of the child. The teacher should possess and exhibit such qualities of mind and heart, that there shall be a greatly constraining and restraining power in his very presence. I have, said Mr. S., seldom been so much impressed with this power, as I was in the person of Mr. CLAY, as Speaker of the House of Representatives, when I first saw him, in 1823. A gentle tap of his penknife upon the table, with his calm, dignified O-r-d-e-r, was generally sufficient. It was the magic of his *presence* that produced the effect. I have since seen Speakers, who wore out mallets and tables, and made themselves hoarse, to no purpose, but to produce the very disorder which they vainly endeavored to suppress.

The teacher must exhibit in himself all that he wishes to see in his pupils. There is a mighty power in example. All feel it—but children, especially.—They look up to the teacher as to a superior being, and unconsciously find themselves imitating him. He must therefore exhibit an example of self-government, if he expects them to govern themselves,—of conscientiousness, if he expects them to be conscientious,—of order, if he expects them to maintain it,—of punctuality, if he would have them punctual,—and of simplicity and truth, if he would have them simple heart-

ed and truthful. He must, in short, be before them, always, what he would have them to be in the school and in the world. There will be greater power in this than in all the rules and precepts he can lay down, if they are contradicted by his own spirit and conduct; for the children will not believe a word of his teachings, if his life does not correspond with them. The Savior's power lay chiefly in his spotless example. He was, himself, a constant illustration of his own teachings. Even Pilate was constrained to say, "I find no fault in him." Without this, his teachings would have been powerless. What a power there was in his *presence*! It was his pure spirit that shone out—that surrounded him as with a halo. How the multitude hung upon his lips! It was because they were unfeigned lips. No guile was found in his mouth, or in his actions. He was kind, even in his rebukes—a sympathizing, affectionate friend—commending himself, always and every where, to the confidence and affection of all.

Such should be the teacher. The confidence and affection thus inspired will not only enable him to govern his school, but will give him a power over the *intellects* of his pupils that no other stimulus can exert. Do you, said Mr. S., wish to *wake up mind*?—Make your pupils love you. It will give to the other needful appliances for stimulating intellect, a vastly augmented power. The parents will not find it necessary to whip their children to make them go to school, nor you to make them learn, for they will rather be whipped than not go to school, and not learn what you may thus make them love to learn.

Mr. C. G. BURNHAM:—The government of schools, like that of nations, must be suited to the genius and character of the governed. I once supposed that I could govern any school upon democratic principles, without resorting to severe measures. I succeeded in managing even difficult country schools upon these principles. But it was my fortune to teach in one of our cities a few years. I soon found my democratic government was fast degenerating into a monarchical, and that of the most absolute kind. The object of city boys is, first to ascertain the character of their man, nor are they long in doing this. They will not yield in many cases but to force. There is no way of getting at the heart but by first scarifying the surface. Moral suasion is powerless, until the pupil has found by experience, that "the way of transgressors is hard." When once such boys are reduced to obedience they make the very best scholars in the world. I would, in all cases, recommend the milder mode at the commencement. Let corporal punishment be the last resort. To know when to resort to it and when not, when to begin and when to end,—here is wisdom. A mistake here may be attended with infinite results. I once punished a boy for some "daring offence;"—in a few days the offence was repeated. I talked with the boy, and intended at first to repeat the punishment, but finally concluded to remit it. The boy told some of his companions afterwards, that my pardoning the offence, which he acknowledged merited punishment, had "*fixed him*," that he never would disobey me again. He was a good boy after-

wards. I do not believe there is any boy, in whose breast Infinite Goodness has not implanted the elements of filial love, and which cannot, in some way, be reached and be made a powerful ally of the teacher in controlling the child. I knew a young man (pardon me for saying I; my own experience is all I can vouch for) whose heart was hard and whose ways were perverse. He was guilty of a misdemeanor which would have justified his expulsion from school. I took an opportunity of conversing with him privately. I said to him, My son, you cannot know the anxieties of a father for his boy. Is it not true, that your father makes an effort to support you away from home! He replied that it was. Said I to him, This does not tell the story of your father's care for you; let me tell you, that your father,—and I say what I know to be true—your father, were it necessary to make a man of you, would consent to-day to die for you. His countenance fell—after a moment's pause, said he, if you will let me try again, you shall have no more trouble with me. Mr. Chairman, the experience of twenty-five years cannot be all told in *twenty-five days*. We cannot, therefore, within the short space of five minutes, do any thing more than merely refer to some facts by way of illustration. The little incidents in a teacher's life are not like incidents in the lives of other men, soon forgotten. The little mortal occurrences attach themselves to immortal remembrances,—they live with him, they are a part of his own history.

Mr. HOWARD thought the difference between Mr. Clay and Mr. White (referred to by Gov. Slade) was not altogether a difference of *looks or appearance*, but in part, at least, a difference of *manner*. They may, it is true, have *looked differently*. But he thought the *charm—the magic power* of Mr. Clay consisted mainly in his perfect coolness and self-possession—in his quiet *manner*—in the *low, clear tones* of his voice, which reached every ear and heart. A quiet manner is always most *impressive*, and a *low tone* has in it the most authority. Orders given in a loud, boisterous, or scolding tone are never much regarded. If teachers would be promptly obeyed, let them avoid falling into this habit,—let them keep cool, move about the school room quietly, and not talk *too much nor too loud*. Mr. H. remarked that he had observed that the *noise in a school was usually in direct proportion to that which the teacher makes himself*. If the teacher is noisy and boisterous, the pupils will soon fall into the same disagreeable habit. On the contrary, if the teacher is mild and gentle,—moves gently, speaks gently,—his pupils will inevitably and almost insensibly catch his manner and imbibe his spirit. In governing a school, *manner* is emphatically *matter*.

Adjourned, to meet at one o'clock.

AFTERNOON SESSION.

Convention met according to adjournment.

On motion, the question, "Is sufficient attention paid to Manners and Morals in our Schools?" was called up.

Rev. T. HALL, of Vershire, addressed the Convention, but his remarks have not been received.

RESOLUTIONS.

Rev. Mr. BROWN, from the Committee on Resolutions, reported the following, which were adopted:

1. *Resolved*, That this Convention witness with heartfelt satisfaction the increasing interest manifested in this and other States in the cause of popular Education.

2. *Resolved*, That a true Education, or the right unfolding, strengthening, and directing of all the human powers, is of transcendent importance to public prosperity and individual welfare.

3. *Resolved*, That every school District in Vermont should furnish the means of a thorough practical education to all the children within its limits.

4. *Resolved*, That to cherish institutions for the universal education of the young, is the highest and most important function of a Republican government.

5. *Resolved*, That as the education of the young is considered an appropriate sphere for woman, she is justly entitled to all the advantages of education furnished to the other sex.

6. *Resolved*, That faithful and competent instructors of youth, are deserving of high honor and respect, and should receive a compensation commensurate with their arduous duties and great responsibilities.

7. *Resolved*, That the true policy of Vermont is to raise up an intelligent, virtuous, and noble race of men and women.

8. *Resolved*, That wherever the principles of Christianity are carried out in practical life, and sound knowledge is universally diffused, there is hope for the permanency of good institutions, and the unlimited improvement of the human race.

SCHOOL JOURNAL.

Mr. HOWARD brought up the subject of the School Journal. He regarded this Journal as one of the best Educational papers he had seen, and the *cheapest*. It should be scattered every where among the green hills of Vermont, and be sent to every cottage in the State. It would do more than almost any thing else towards calling the attention of the people generally to common school education, and causing them to feel that it is a subject of paramount importance.

Mr. LEACH, of Nashua, N. H., stated that Rev. Mr. Rust, State Superintendent of New Hampshire, wished a School Journal in that State, and would be glad to have some measures adopted to have the same Journal circulated in both States. Whereupon, a Committee, consisting of Messrs. J. P. Fairbanks, R. S. Howard, and Bishop & Tracy, was appointed to correspond with Mr. Rust on the subject.

Rev. Mr. PERRY, of Danville, offered the following resolution:—

Resolved, That the thanks of this Convention be presented to the people of this village for their generous hospitality extended to its members during its session; also to the Choir, for their very acceptable performances,—and to the Trustees of the Methodist Society, for the use of their house.

The following resolution was introduced by Rev. C. TAYLOR, and was adopted:—

Resolved, That this Convention highly approve of

the plan and execution of the School Journal, published at Windsor, and that we earnestly recommend to all the friends of education in the State, that they make earnest efforts to place this Journal in the hands of every family in our commonwealth.

The Committee to consider the expediency of calling another Convention and making arrangements, reported that it is expedient that such a Convention be called, the time and place of which will be made known at a future time.

Dr. WHEELER addressed the Convention.

Voted, That the Convention approve of the proposition introduced by Rev. Mr. Ranney, of memorializing the Legislature in the form presented.

The Convention then listened to an address by Gov. SLADE, after which it

Adjourned without day.

HORACE EATON, *President*.

N. BISHOP, } *Secretaries*.
J. K. COLEY, }

ABSTRACTS OF ADDRESSES.

The Claims of Physical Education.

BY REV. D. H. RANNEY, OF DOVER.

Mr. RANNEY defined Education as the perfecting of all the attributes of human nature, the training up of a helpless immortal being from infancy to manhood; from a state of utter weakness, dependence, and ignorance, to one of mature physical, intellectual, and moral strength. He went on to show what were the consequences of cultivating these natures singly; and how education, to be complete, must be symmetrical and simultaneous, with reference to all man's powers, and especially that, without physical culture, genius, intelligence, and virtue became inert. He showed the first efforts of the child in handling a toy, in creeping and walking, and in uttering articulate sounds, to be the primary rudiments of physical education. That this education was carried on still farther in the labors of the field, in the domestic arts, and in the various trades and employments of life. That its perfection in some respects, was observed in musical performances, and in the enunciation of sounds by the organs of speech. It was made apparent that the *law of habit*, in every thing so controlling on the actions of men, and which governs muscular effort on the keys of the piano, or the strings of the violin, and in the larynx, in vocal music, is only a development of physical education. The same is true of grace in manners and skill in arts.

He presented the following, among others, as the conditions of health and perfect physical development:—

1. *A well regulated diet.* This topic involves inquiry into the *quality, quantity, and manner* of receiving our food; upon each of which subdivisions the speaker dwelt in order. The general law by which diet should be regulated, was shown to be that of *growth and waste*. The child must receive, for nutriment, such food, and in such quantities, as will furnish all the elements which enter into his corporeal being.—Any deficiency in these elements will soon manifest

itself in some characteristic form. Milk alone, of all articles of food, furnishes all these elements. This is why it is furnished to all mammiferous animals at the beginning; and to children, by some domestic quadruped, after they are turned off by the natural mother. And why they universally have given them such a relish for it. Milk, then, is the appropriate food for children, and we should act upon a principle which was thought worthy of a place in sacred writ—that they should be fed with milk, and not with meat till they are able to bear it. With the adult only, the law of waste is to be considered in the matter of nutrition. There can be no action without waste. This is as true in organic life as in mechanical motion. As the revolving wheel wears upon its axle, and the water drop upon the surface on which it falls, so action wastes away the material of our bodies.—Nutrition, in the adult, has for its object the supply of this waste; in the child, the same supply, together with the furnishing of the elements of growth. And appetite, unperverted, is nature's demand for this needful supply. The speaker showed that the quantity of food received should be regulated by this law; and therefore would correspond to growth and activity. And further, that it should contain enough of innutritious material to keep open and free the organs of digestion. That the excrementary part should be increased when there was torpor in the intestinal canal, and diminished when its action is too free. The danger of over-eating when one is not engaged in active pursuits was properly exhibited, and the murderous custom of taxing the stomach irregularly and at improper hours fully exposed.

2. *Appropriate and seasonable Exercise.* This was shown to promote waste, and therefore to quicken appetite, and hasten the process of renovation; to keep active all of life's functions, and quicken the vital powers. It establishes more active nutrition, and thus increases the power and size of all the organs and limbs of the body. It was shown that exercise should be vigorous, but moderate, and not continued to lassitude and exhaustion; for thus it would defeat the end in view. That it should not be taken immediately before or after a meal; because it will tend the blood and nervous energy to the surface and extremities, and the stomach be taken at disadvantage. The period most favorable is the morning, when the air is pure and invigorating and free from the oppressive heat of noonday and the damps of evening. It should engage the mind as well as the body. Exercise that is lucrative or diverting is as healthful as it is pleasurable.

3. *Attitudes.* An erect posture, in sitting or walking, is necessary to the free action of the chest and of the diaphragm and abdominal muscles. Neglect, in this respect, is the fruitful source of spinal curvatures, crooked limbs, sloping shoulders, and attendant weaknesses and irregularities so common in this age of false refinement. These evils may be avoided.—A correct habit may be as easily confirmed as a wrong one. And we should remember that not only deformity but disease are the result of neglect.

4. *Dress.* In youth the skin is more vigorous in constitution than in earlier or more advanced years.

Hence it will endure, with impunity, greater exposure. The child may be accustomed to light clothing and sudden changes and not suffer by it. He may thus be inured to exposure, and benefitted by it. If one is more delicate, he must be dealt with more tenderly, but this is the period when weaknesses may and should be removed, and when by a careful and gradual subjecting him to trial, he may be prepared for subsequent exposures and hardships.

Open and light dresses, thin shoes, and other fashionable follies received their due share of attention; and particularly tight lacing, and other artificial restraints upon the free and natural action of the muscles and vital organs. Woolens were shown to be the best fabrics for wearing apparel, from their warmth, porosity, and gentle irritation on the surface of the body.

The speaker dwelt at some length on *the necessity of a pure atmosphere*. But as this subject was so fully discussed in other remarks reported, his suggestions are here omitted.

In conclusion, it was observed that more attention should be given, by parents and teachers, to this subject, and that Physiology should be introduced as a study into our Academies and Seminaries of learning. That every one should learn for himself the facts and principles on which the science of health is based.—It is encouraging to observe that public attention is now being turned to the perfecting of human nature; to the making of man, in all his powers and faculties all he may become in this, at least, imperfect state of existence. But we must bear in mind that man's fall was not one merely of a physical character, that his corruption is not merely a corruption of manners. If it were so, he might be restored perfectly by earthly training. It might truthfully be said that if he abstained from meats, he and his offspring, for a sufficient period, he might live to the age of the Antediluvians. And that if we schooled ourselves to continency, we should become perfectly pure in habits, thoughts, and feelings, with no reference to the grace of God, which alone bringeth salvation. And thus man presents the novel and unlooked for spectacle of returning to his Eden state by the path he went out. Many have been the attempts of such as discard the doctrine of human depravity, to discover and bring out this true man, this *model mortal*. The earth has been ransacked in vain to find him, and when the eager expectant has returned wearied and disheartened from his fruitless search, he has, in the extremity, sought to produce, by the application of his favorite but utopian rules, the being upon whom he would gaze. But alas we have not, and we may not see on earth, a being in mortal form, begotten in Adam's likeness, upon whom appears the first finish of the Great Architect's hand. And no adorning we can give our children, can restore them to man's original glory. To say the least, the law of descent has left on every individual of an apostate race, the evidence of a fallen creature. And man cannot be brought back to the perfection even of physical development, till all the restraints of a perverted taste are taken off, all the influences of an irregular life removed, and the legitimate tendencies of deformity and impotency

to hereditarily propagate themselves, have been fully escaped. Let us do what we can; all that love for our children and delight in the welfare of mankind can prompt, and leave the rest to Him "who is the resurrection and the life;" believing that man's physical regeneration is to be consummated at the resurrection of the just, when "this corruptible shall put on incorruption, and this mortal be swallowed up of life."

The Claims of Common Schools.

BY ROGER S. HOWARD, OF THETFORD, VT.

Mr. H. began by alluding to a New England farmer, who is reported to have said, "We find it difficult here to raise large crops, and we therefore build churches and school-houses, and raise men." This was a noble sentiment, and happily expressed. The church and the school-house—the Christian religion and the free school system—have made New England mainly what she is, the admiration of the world. They had given her a comparatively intelligent and virtuous population, and had laid deep and broad the foundations of her greatness and prosperity.

He paid a high compliment to the natural qualities of the inhabitants of Vermont. In physical energy, mental vigor, and manly independence, the Green Mountaineers are, he thought, a match for any body the world over. Other States may have carried the process of cultivation and refinement somewhat farther, but nowhere could there be found a better or a richer *original material*. To work and to polish this material, he said, was surely the policy, and should be the pride, of our own beautiful State.

In presenting some of the claims of Common Schools, (he should not attempt to speak of them all, for their name was legion, and the time would fail him,) he asked the attention of the audience, for a few moments, to the *origin* and the *object* of the system itself.

The free school system had its origin, he thought, in the teachings of Christianity—in that deep love of liberty, and in those great principles of essential equality and universal brotherhood, so beautifully illustrated and enforced by the life and teachings of Jesus Christ. Christianity teaches that all men are equal in the sight of God. The free school system is based upon the same Christian principle of equal rights; and asserts and practically maintains that every child, however humble, has a claim to a good, substantial education, and is entitled to its full share in the great heritage of knowledge and of thought.

The system was modern in its date. The nations of antiquity had nothing like it. On the broad map of the past, we could see here and there a few radiant points. But they were only points. They were like the green oases of the desert—or rather like little islands of light in an ocean of darkness. In the histories of Greece and Rome, we may see a few brief and brilliant periods of learning, when education was carried to a high degree of perfection. But it was the education of the *few*, not that of the *many*,—the education of the *rich*, not that of the *poor*. The wisest sages and statesmen of antiquity never dreamed

of educating the masses of the people. This was a Christian idea; first fully developed and carried out by our Pilgrim Fathers, who evidently believed, with a great statesman, that "human happiness has no perfect security but freedom, freedom none but virtue, virtue none but knowledge; and neither freedom, nor virtue, nor knowledge, has any vigor or immortal hope except in the principles of the Christian faith, and in the sanctions of the Christian religion."

The object of the free school system was to furnish to all the children of the community, rich and poor alike, the means of a good, substantial education.

He dwelt at considerable length upon the enlarged benevolence of the system, the grandeur of its original conception, and the greatness of its practical benefits. It carries the light of knowledge into the cottage of the poor, as well as into the mansion of the rich.

Common Schools are great *levelers*; but unlike some modern levelers—self-styled reformers—who would divide the world every Saturday night—unlike these, the Common Schools level up, and not down.

In the first place, Common Schools have strong claims upon the rich, the well-educated, and the influential. Without the support and patronage of these classes, these schools can never become what they ought to be, the best schools of their grade. They will be, in fact, schools for the poor, and, as a natural and almost necessary consequence, poor schools. But let all classes cordially unite to sustain them,—let the rich and the influential support them by their money, and patronize them by sending to them their children, and they will soon become the best and cheapest schools,—good enough for the richest, and cheap enough for the poorest, man in the community. This position was supported by a great variety of facts and illustrations, tending to show that this mode of educating children was the most expedient, the most republican, and the most economical.

He strongly urged the claims of our Common Schools upon the Legislature. In our country, the people are, in fact, the sovereigns. Through the ballot-box, they create and control the government. They make and unmake the laws. Our free republican institutions rest upon the virtue and intelligence of the people. Hence the duty of the government to sustain and cherish the free schools, which enlighten and elevate the masses of the people. And the time is not distant when no man, or party of men, will dare oppose this doctrine. The people are beginning to understand their true interest in this matter of common school education. A great change in public opinion has taken place within a few years. Men are beginning to see more clearly the connection between light and liberty,—intelligence and success in life, and that for a child knowledge is the safest investment and the best inheritance.

Common Schools, he said, were the people's College. In them nine tenths of the people get all the public education they ever receive. In them many of our greatest men were educated. Washington, and Franklin, and Sherman, and Clay, and Cass, and Corwin, and a host of others, whose names would fill a volume, and whose fame is the common property of

the nation, received all their school education—graduated if I may so speak—from the Common Schools. In these schools will be educated most of our farmers and our teachers, our mechanics and our merchants, our jurors and our judges, our statesmen, our orators, our theologians—those who make our laws, and those who minister at our altars; in short, the great mass of those, who hereafter under God shall form the character, control the councils, and direct the destinies of our great republic. Have they not then strong claims upon the support and sympathies of every patriot, philanthropist, and Christian?

In conclusion, he said that he had always been an ardent—almost an enthusiastic admirer of natural scenery. On a calm summer's day, he loved to stand upon the beach and look out upon the broad blue ocean stretching away like immensity. He loved to look upon that same ocean, when lashed into fury by the tempest in its wrath, and listen to its choral anthem going up to heaven like the voice of many waters. He loved the bold and beautiful scenery of our own beautiful State. He loved to look upon hill and valley and sweetly-flowing stream, all radiant with the smiles of God,—upon the quiet lake reflecting from its mirror surface the surrounding landscape, and upon the laughing rivulet, leaping down the mountain side, like a line of light, singing and rejoicing on its way like a thing of life.

But he loved more and better the lovely district school house, where the humblest child of the obscurest peasant might be educated—might be made a good citizen, an intelligent virtuous, and honest man.

The Duties of Parents in relation to Common Schools.

BY MR. C. NORTEND, OF SALEM, MASS.

1. It is the duty of parents to provide good school houses and suitable accommodations for their children.

It is, doubtless, true that many a youthful mind has acquired an unconquerable dislike, and even dread of school and everything pertaining thereto, from the unpleasantness, inconvenience, and dreariness which combined to form its first impressions. It is equally true that suffering, sickness and death have often resulted from ill constructed houses and from a total disregard of the principles of ventilation.

A school house should be placed on some pleasant spot, have ample play-ground well supplied with ornamental trees and shrubbery. The house should be commodious, well furnished, and well ventilated. The seats and desks should be constructed with a particular regard to the comfort and convenience of the pupils.

2. Parents should provide good Teachers.

A Teacher's influence over the tender and susceptible minds of the young is very great, and parents cannot be too careful in the selection of those to whose care the schools are entrusted. The teacher's whole life, his deportment and conversation should be such as may be safely imitated. He should be a pattern of all that is desirable. But to secure and retain the

services of such teachers, parents must be willing to pay liberally and cheerfully; for while a really *poor* instructor is worse than useless, a really *good* one is "above all price."

3. Parents should confide in the teacher and sustain him in every suitable way.

The teacher is often placed in a trying situation and he needs the sympathies and coöperation of parents. They may do much to sustain him in all his plans and to cheer him under all his trials. They should not expect him to teach too much but they should encourage their children to be diligent and persevering. Parents and teachers should labor together in their endeavors to secure application on the part of the pupils.

4. Parents should coöperate with the teacher in cultivating habits of courtesy and true politeness.

More attention should be devoted to these particulars. The rising generation is becoming too reckless,—manifest too little respect for reverence and age. Let children be well trained in habits of true politeness and civility and they will become better scholars in every respect; they will be more studious, more happy, more obedient, more orderly.

5. Parents should manifest a respect for the teacher and a confidence in him, in the presence of their children.

Nothing will do so much injury to a school as the habit of finding fault with, and speaking disparagingly of the teacher, at the fireside. Children will feel but little respect for him of whom their parents speak in terms of disrespect.

6. Parents should not expect too much of teachers.

Parents naturally desire their children to rank high in scholarship and deportment, and are too ready to censure the teacher if they do not. But let parents remember that sometimes the best directed efforts of the best of teachers will prove of no effect upon some pupils.

7. Parents should be willing to have their children *thoroughly* instructed.

Some parents are so anxious to have their children attend to a multiplicity of studies that they censure that teacher who makes thoroughness of instruction more prominent than variety of studies. This is wrong; it is better to teach *well*, than to teach many things.

If parents and teachers will labor with union of feeling and singleness of purpose they may accomplish much good and secure for the rising generation invaluable blessings.

The State Educational Convention.

In compliance with the request of the State Educational Convention, the readers of the Journal will find this number entirely devoted to the proceedings of that meeting. We have never issued a number which we considered so valuable to Vermont, as this. It embodies the views of many experienced teachers and other intelligent friends of education on a variety of subjects of the first importance. It deserves the careful attention of every teacher and parent. The abstracts of lectures and discussions have been mostly prepared by the speakers themselves, and will be

found to embody a great deal of matter in a little space. We have to regret the failure of some gentlemen to furnish the materials expected of them,—especially Mr. BURNHAM of Manchester, whose very excellent Address on School Government ought by all means in some way to come before the public. It has been thought better not to attempt to supply the deficiency in these cases by any such imperfect outline as the few notes taken at the time would enable one to prepare. Such Addresses as those of Rev. A. BROWN and President WHEELER, for instance, it would be useless, as well as unjust, to represent by any hearer's report.

The School Journal and Vermont Agriculturist.

This sheet will fall into the hands of many who are not subscribers. To such we have to say

1. That it is the plan of the paper to devote the first eight pages of each number to education, and the other eight pages to Agriculture, Horticulture, and Domestic Economy.

2. That, when taken in packages of 16 or more, it is the cheapest paper of the kind any where published. See Terms, below.

3. That the volume begins with the May number, and can still be furnished complete.

4. That a few copies of the first volume, neatly done up in paper covers, with title page and index, can be furnished at 50 cents; or to teachers who order the first and second volumes, 50 cents for both.

REPORT ON SCHOOL HOUSES. THE APPENDIX to the *Report on School Houses*, published in the August number of this Journal, should have been credited to HENRY BARNARD, Esq., Commissioner of Public Schools in Rhode Island. The omission of the credit was doubtless inadvertent on the part of the Committee. The document from which the extracts were taken originally appeared in the Connecticut School Journal, and is now embodied in a handsome volume—*SCHOOL ARCHITECTURE*—a most excellent book, prepared with great care by Mr. Barnard, and published by A. S. Barnes & Co., New York. A copy ought to be in every school district.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following
TERMS:

For a single copy,	- - - -	50 cents.
5 copies, sent to one address,	- -	2 00
10 " " " " "	- -	3 00
16 " " " " "	- -	4 00

And any greater number at the rate last named, or 25 cents per copy.

☞ Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers *not* written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. II.

WINDSOR, VT., NOVEMBER, 1848.

No. 7.

THE SCHOOL JOURNAL.

School Economics.

In regard to the approaching winter schools it is probable that a false short-sighted economy will be adopted. Such has been the case, time out of mind, in most districts. It would be well to examine the matter a little.

It is an obvious principle in all business that, where a considerable investment has been already made, any trifling additional expenditure necessary to the best success, ought to be cheerfully incurred. If one, for instance, has purchased a thousand young fruit trees, true economy would require all the expenditure necessary in order to have the transplanting well done. Five, or ten, or twenty cents, if need be, additional, spent in setting out, might make a difference of years in bringing the trees into bearing, and of half in the annual value of the crop for a long time after,—all the difference, in fact, between a very profitable investment, and one next to a total loss. In the Dairy, after all the expense of cows, feeding, milking, &c. &c., to get any butter at all—butter that would sell for 12 cents—good economy requires the little additional care and expense necessary to make the butter worth 18 or 25 cents.

And so it is in regard to our District Schools. There are two or three hundred dollars, perhaps, invested in a school house. It may answer its purposes tolerably well. But the addition of \$25 or \$50 more to the expenditure, so as to make everything—warmth, ventilation, arrangement, furniture—as it should be, might make the house worth twice as much, considered as a means of education,—twice as much every year, for a quarter of a century.

A Teacher must be hired. You must give him, say, including board, \$15 a month at least. Then you must furnish wood, a house in which to keep the school, books, paper, the time of your children.—None of these expenditures can you possibly avoid if you have a school at all. The whole expense, for a school of 30 scholars, for four months, cannot possibly be less than 150 to \$200,—economize on every hand as much as you may. But here is another teacher, of superior qualifications, who may be had, say for 5 or \$10 a month more. He has been at the expense of preparing himself. He has given time and money, for which he may justly expect a return in higher wages; and he is so prepared, that under his management a school of four months will do twice as much in the education of the children of the dis-

trict. The school will be actually worth twice as much, to every man, woman, and child interested in it. This is no extravagant supposition. It is what every one who has observed the results under different teachers to any considerable extent, must have often seen. Indeed the difference is often far greater. Now in this case the school kept by the superior teacher would cost 20 or \$40 more than that of the poor one. But, supposing that of the poor one to be worth \$200, that of the good one would, on the supposition, be quite as well worth \$400; while the actual additional cost would be only \$40—or perhaps half that. The District would therefore get the value of \$200 by expending \$40, or less, in addition to what it must necessarily expend, in order to have a school at all. Yet in this estimate we have not taken into account one of the most important considerations that deserve a place in the calculation,—we mean the value of the scholar's time in future years. If a boy can learn when twelve years old under one teacher, what under another would be delayed to the age of fourteen, he has, in the first place, the advantage of that knowledge as so much capital, in use and accumulating from year to year; then, the advantage of having made the acquisition rapidly and well, which is worth as much as the acquisition itself;—and finally, the time, when older, for other purposes.

As to the scholars,—you are at the expense of the school, whether your children attend it every day, or only half the time; whether they are furnished with all necessary books, &c., or not. A wise economy requires that you should allow no school hour or school privilege to be wasted. Your children should be there every day, and in season. If the school for 30 scholars is worth \$400 for four months, it is then worth about 14 cents a day for each scholar. How many parents there are who would by no means waste that amount in any other way, but who yet, for any trifling cause, allow their children to lose day after day of precious school time!—precious, because this pecuniary estimate makes no approach to ascertaining its real value. How many, too, for want of a book that would cost a shilling, lose half the benefit of the school for weeks together,—lose what actually costs, at a cash estimate, several dollars!

We mention these particulars, and use such pecuniary estimates, not because a good school is to be thus properly estimated, but merely to induce our readers to examine for themselves, and to see how a given amount of money, or its equivalent, may be made to do the most towards securing a good education in our common schools. Let the whole subject

be examined—take up item by item, and extend your calculations over a series of years,—and nothing can be more plain than that good school houses, good fires, good furniture, good books (and new ones every year, and every month, if better) and the best teachers,—are beyond all comparison the cheapest in the end; and that to fail in providing any of these, on the ground of expense, would be the exact kind of economy that *withholdeth more than is meet*, and yet *cometh to poverty*.

For the School Journal.

Moral Education.

NO. IX.

Physical and Intellectual Employment. There is a principle or peculiarity in human nature, hitherto too much neglected, though really of great importance in moral education. By some metaphysicians it is called *activity*, or the *desire for action*. This is the grand moving power which excites to every species of improvement. Without it, man would be dull and sluggish; society would make no progress. It is aptly expressed by the old proverb, "When the Devil finds a man idle, he quickly sets him to work." Without some object on which to exercise its powers, the mind preys on itself, and becomes wretched. Hence the numerous games and amusements devised by young people to occupy their vacant hours. Now if all these pastimes were of an innocent nature, children might safely be allowed to select such as were most agreeable to themselves. But every one knows that this is *not* the case. Many of their amusements are of a gambling character, or at least their tendency is strongly in that direction. It is important, then, that the young, more especially boys, should be *encouraged* to follow *innocent* sports, and be warned of the danger attendant on the others. Simple prohibitions will seldom have a good effect. The appetite of youth is too apt to be whetted by denial. Let nothing be done to tempt to a deceit that might corrupt the sweet fountain of truth, the well-spring of all that is good and noble. Nothing can have a worse moral tendency than concealment. A youth of a frank, open disposition, one who *never* seeks to hide his thoughts and actions, can hardly go wrong. But when the frankness and artlessness of a child is destroyed, when once he has begun to *fear* his guardian or teacher, to *hide* from his eye, he is in a state of rapid preparation for all manner of wickedness. Instead of leading youth, then, with dogmatic prohibitions, let every facility be given for innocent pastimes, and see that they distinctly understand *why* we wish them to avoid the others. Thus we shall acquire their confidence. They will feel that it is not their amusement, not their happiness to which we are opposed, but exactly the reverse. Let the play-ground around the school-house, then, be well supplied with facilities for gymnastic exercises. Let a small spot be cultivated for flowers, to inspire a taste for simple pleasures of this nature, and to wean, in some degree, from grosser propensities. And it might be well if a martin-box, or a dove-cot, were attached to

the building, in order that the teacher might give *practical* lessons on kindness to animals.

Every mother has felt the want, the pressing, crying want of interesting employment for her young children; and yet, strange to say, few ever think of exerting themselves to supply the deficiency. "Mother! mother! what *shall* I do!" is the universal lamentation of childhood. The only remedy that suggests itself is packing off to school; and for this purpose districts are divided and subdivided, until the means for keeping a good school are completely frittered away. And what benefit is derived from thus placing a school-house at every man's door? None whatever. The practice is prejudicial to the young child himself. He suffers both in health and in intellect. And it is seriously annoying, both to the teacher and the other pupils. It is full time that this evil was abated by law. The school-house should not be allowed to be converted into a nursery.

Why cannot parents provide a few wooden blocks for the amusement of their children at home, or allow them a few square feet of ground for a garden? It would be better still if the child could be furnished with some amusement in the form, or under the name of *labor*. No matter whether it be profitable or unprofitable. The object is to afford *employment*, and to impress on the child the idea that labor is both profitable and honorable. And for this purpose it should be conferred as a favor or privilege. It will soon be viewed in this light if the child be properly encouraged to perseverance as a *manly* effort, and never urged to weariness. There is no more powerful obstacle to the improvement of society, than the false, degrading ideas of labor that we have derived from our European ancestry. Young people, it is admitted, commit more faults from thoughtlessness than from evil intent. Want of reflection leads children astray much oftener than want of principle. Still, if this subject were closely examined, it would be found, that more moral evil arises from the dread or shame of labor, than from all other causes put together. Surely it is full time that an effort were made to stop this growing evil in our land.

Love. The subject of these essays swells upon my hand. But as it is time they were brought to a close, I shall make this my last topic, reserving one more number for a recapitulation.

There are some truths which rarely if ever suggest themselves to the uncultivated mind, and yet, when once mentioned, they are so completely in accordance with our best feelings, that their force and authority is at once admitted, without the slightest resort to logical reasoning. The *power of love* is one of these.

"Love," says President Dwight, "constitutes the *whole* moral character of God."* It is now nearly two thousand years since the Great Teacher proclaimed that evil could only be overcome with good. But, alas! how few, even of his professed followers, have *practical* faith in his doctrine. We still go on, as perversely as ever, *trying* to overcome evil with evil,

* Dwight's Theology, quoted in Webster's Quarto Dictionary, p. 117.

with the worst results, as the condition of things plainly testifies.

To love *others*, says Mrs. Child, is greater happiness than to be beloved by them. To *do* good is more blessed than to receive. The desire to be beloved is ever restless and unsatisfied; but the love that flows upon others is a perpetual well-spring from on high. This source of happiness is within the reach of all. The amiable Mary Howitt has a similar sentiment. We do *ourselves*, says she, more good by little acts of kindness than even the person we oblige. That singular enthusiast, Swedenborg, expressed the same idea in a manner still more forcible. What shall be our reward, says he, for loving our neighbors as ourselves in this life? That, when we become angels, we shall be enabled to love him *better* than ourselves.

If these sentiments be true, and what heart is there that does not respond to them, how important that they should be held out to children, and elucidated by examples that will bring them home to their bosoms! and what is still better, as is so often done in the school books to which I have before alluded, that those ideas should be developed in the minds of the young pupils themselves by suitable questions!

DYMOND.

Music Lessons in German Schools.

Mr. W. B. Bradbury, who is in Germany for the purpose of musical improvement, gives in the N. Y. Evangelist, memoranda of his visits to the schools. The following relates to one of the public schools in Leipzig:—

"Dr. V. accompanied me to Herr Gedhard's class of girls, pupils from eight to ten years of age. Herr Gedhard exchanged a few words, during which he informed me that he had for about fifty years enjoyed the instructions of the celebrated Mendelssohn, and then turned to his class, saying, 'We will now proceed with the studies, but instead of the usual lesson for this hour, we will have a singing exercise.' At this apparently unexpected announcement, there was an universal demonstration of rejoicing, which being too strong to be controlled, broke out in joyous exclamations, clapping of hands, and various other juvenile expressions of approbation.

The teacher now commenced practicing them on the vowels, merely articulating them for the purpose of obtaining a good delivery, whether in singing or in speaking. After some six or seven minutes' practice at this, the teacher sings, giving examples of good tones, and also of bad ones. The scholars imitate them, and learn how both kinds are made. They are kept in a constant good humor, but not allowed to be boisterous or disorderly. At this age pupils sing almost entirely by ear, the Germans believing that one of the most essential parts of musical cultivation. They sing the scale, learn the letters, and sing by them, also the tones of the common chord, but very little farther. The first half of the lesson is spent in these elementary exercises, the teacher continually reminding his pupils of the importance of pure enunciation, and good and distinct articulation, thus facili-

tating their reading and speaking exercises, and of the great importance of their bodily position. Whether standing or sitting, it must always be erect, with the shoulders thrown back, giving the chest as much projection as possible, and allowing the lungs free play. The last part of the lesson is wholly spent in singing cheerful moral or religious songs from their music books. At 10 o'clock, the second class of the second division of young ladies commenced, teacher Herr Z.

The pupils were singing a choral as I entered; average age about twelve years. One of Herr Z.'s peculiarities is close questioning the scholars individually. Any one is liable to be called upon, hence every one must attend closely to the instructions. This class is advanced in the elements, and sing plain music by note. They also sing by ear. Their answers to the various questions were given with apparent coolness and deliberation. They are taught to think and to reason. The first part of the lesson consisted in choral practice similar to what has previously been described, reading music by letters individually, and questions upon the signatures and various elementary characters. When they learn a new piece, they are required to put in practice all they know of the elements, and study the piece very analytically before singing it. The last part of the lesson was here also spent in singing cheerful songs from their juvenile music books.

In all the schools I have yet visited, I have not seen half so much confinement to close elementary study as I expected to witness. One thing is not persisted in by the teacher till it becomes tiresome to the pupils; but, on the other hand, variety and entertainment are mingled with instruction, and the pupils seem to work cheerfully and with a hearty good will. The pleasure of half an hour's social singing seems to be a sufficient reward to them for persevering in any of the more laborious and less interesting exercises. Not too much is attempted, but what is learned, is learned most thoroughly. If on leaving school the pupils possess a good knowledge of the elements, and can read plain music in the different keys, it is as much as is expected of them. All sing as a matter of course—voices fair, not superior; sing in good tune, time not so good. Do not beat time; music board very seldom used. The great interest manifested by all the scholars in their lessons, most be encouraging to the heart of their teacher as it was refreshing to mine."

DANGER OF REVERIE. Do anything innocent rather than give yourself up to *reverie*. I can speak on this point from experience. At one period of my life I was a dreamer, castle-builder. Visions of the distant and future took the place of present duty and activity. I spent hours in reverie. I suppose I was seduced in part, by physical debility. But the body suffered as much as the mind. I found, too, that the imagination threatened to inflame the passions, and that, if I meant to be virtuous, I must dismiss my musings. The conflict was a hard one. I resolved, prayed, resisted, sought refuge in occupation, and at length triumphed. I beg you to avail yourself of my experience.—*Memoir of Dr. Channing.*

Teachers' Institutes.

The season for the autumn Teachers' Institutes has arrived. If one could be had in each county in the state, under good management, and attended by all who are to teach in the county during the winter, we should regard it as the opening of a new era of educational improvement among us.

The Institutes this autumn are held, we suppose, with more special reference to the winter schools.—Our earnest advice, however, would be that all who expect to be employed as teachers within a year, should attend them. There are many teachers whose opportunities to learn methods of teaching and management have been limited, and who consequently, with the best intentions, and with every other qualification as to talent and scholarship, fail to satisfy themselves as they might, and to do the good they ought. Let such by all means attend the Institute. They will probably find just the hints, instructions, and incentives that they want.

Young ladies who expect to teach next summer should attend the Institute now, instead of waiting till Spring. They would gain materials and guidance for studies during the winter, and probably find opening before them new views in regard to the employment, that would constrain them to attend in the Spring also. The expense is but a trifle; and no young lady who has the true spirit of a teacher, would regret any amount of self-denial and effort necessary to meet it.

The claims of these Institutes upon the public are not yet duly appreciated in Vermont. The expense ought to be defrayed by the appropriation of state or county funds. There is not a class of human beings among us uninterested, or that would not find a good Institute a blessing. And not least, if the business is managed as it should be and as it generally is, would our Academies find in them valuable auxiliaries,—increasing, rather than diminishing their number of scholars, and furnishing to teachers and pupils new incentives to effort, new hints in regard to improvement, and a wider field for exertion and influence.

In this connection we must copy a few paragraphs from Mr. Russell's "*Suggestions on Teachers' Institutes*," lately noticed by one of our correspondents,—an excellent manual, discussing their character and design, organization and influence, with minute instructions in regard to exercises, lectures, &c. It is a pamphlet of about 50 pp., published by Tappan, Whittemore & Mason, Boston.

After speaking of Academies and Normal Schools, as not doing away the necessity of Institutes, Mr. Russell proceeds:—

"*Effect of Institutes on Schools.* Teachers' Institutes have, in the vast majority of instances, been productive of immediate, substantial, and extensive benefit, in the improved condition of schools in those regions where they may have been established, and particularly so in those where they have been put on a permanent footing. Few have, as yet, been held, anywhere, but under the guidance of capable and skilful instructors. The most eminent men, in other

professions besides that of instruction, have also generously rallied to the aid of education, as a common interest. In most places, institutes have, by the liberality of the State, or of the people themselves, acting more directly, been enabled to command the services of the ablest instructors in every department of education. The students of institutes have, accordingly, received the most exact and extensive training which was practicable within a limited period. They have been impelled to the most strenuous exertions for their own improvement, and have gone out to their duties, as teachers, with a truer insight into their art, a deeper interest in its results, and a conscious accumulation of resources, which have made their daily labor a scene of pleasure, because one of success.

Effects on the Community and on Education. The sessions of institutes have been productive, likewise, of the best effects, in bringing the teachers' labors more prominently before the community, and conducing to the general formation of a higher estimation of their value, from a truer perception of their nature and results, as these affect the character of individuals and the welfare of society. The mingling of parents, on such occasions, with teachers and committees, has excited, in the minds of the first, a warmer interest in the intellectual and moral guardians of their children, and a readiness to listen, with favor, to broader views of education, and better modes of teaching, than were formerly current. The doors of improvement have thus been effectually thrown open; and the advancement of education encounters no stop. Had institute meetings effected no farther good than that of deepening the interest of parents in the education of their children, their benefits would have been incalculable.

Effect on Teachers. But teachers themselves have also been extensive partakers in the good results of these institutions. An institute is of itself a recognition of instruction as not merely an employment, but a "profession,"—an occupation for which candidates must now *profess* certain qualifications. In the establishment of an institute, a teacher sees the dignity of his vocation acknowledged. This single circumstance is a new call upon his ambition. He aspires to the true rank of worth in his profession, and addresses himself with fresh interest and zeal to its exhausting but honorable toils.

Effect on Pupils. There is yet another class of society who are tenfold gainers by the action of teachers' institutes,—the children at school,—the budding hope of every community. Observe where an institute session has been held, and you will see keener eyes and brighter faces, in the juvenile rows of the schoolroom. The happy impulse given to the teacher's mind, at the institute session, tells on his daily teaching and government. His work has been rendered lighter and pleasanter to him, in all directions, than before. He has learned how, better than ever, to succeed in kindling the young mind to ardor in the pursuit of learning: he keeps the minds of his pupils pleasingly employed, as the bee amid the flowers of summer: diligence and cheerful industry are the habits of the mental hive: application has become an intense pleasure: idleness and misconduct have been

displaced by a genial preventive regimen : morbid reaction, with its legion of pains and penalties, is unknown, alike to teacher and pupil. The teacher has, in a word, become a skilful and a successful man in his pursuit : he loves it and all connected with it.—He works strenuously and with delight ; and the hours and successive days of school life, pass, in consequence, pleasantly with the young.

Testimony to the good effect of Institutes. But to enlarge, in this day, on the benefits attending teachers' institutes is unnecessary. The uniform testimony, from all places where they exist, is too loud in their favor to require additional attestation from any individual. Were it otherwise, nothing could be easier than to fill up successive pages with the opinions of the highest official authorities on this point, in all those parts of the Union where institutes have been held, and where State officers of education exist."

AN EXAMPLE.

In Rockingham County, N. H., the first Teachers' Institute has lately closed. It was held at Exeter, and was regarded by many as a doubtful experiment. Messrs. William Russell and C. A. Leach (a true Vermonter, whose zeal and skill those who have the direction of such things in his native State would do well to enlist) were the principal teachers. It was perfectly successful. For two weeks it was the leading topic with the Exeter News Letter,—notwithstanding the election. It was attended by 60 Ladies and 45 gentlemen, as pupils. Besides the constant efforts of Messrs. Russell and Leach, Mr. Northend, of Salem, gave a series of Lectures on the art of Teaching. School Committees and other friends of education from various parts of the County came to see, especially at the close, when, on motion of David Currier, Esq., the following resolutions, among others, were adopted :—

Resolved, That the gathering together of so many Teachers, the discussion of important topics connected with education, the exposure of old and defective methods of instruction, the suggestion of new and better ways, the elucidation of obscurities in textbooks, the solution of difficulties in government, the opportunity for interchange of thought and feeling, the brief but thorough discipline in the ordinary branches of English study,—all these cannot but result in the elevation of our Common Schools and in the consequent highest good of the County.

Resolved, That the strong interest manifested by the Class Members, their obvious improvement, increased enthusiasm in their profession, their higher conceptions of their duties, and their better preparation for their performance, encourage us to use our utmost exertions to induce the several towns in the County to avail themselves of that wise provision of the law which relates to Teachers' Institutes ; and we hereby pledge ourselves, as individuals as well as members of the Association, to secure, if possible, the annual return of this high festival of learning—this "feast of reason and flow of soul."

The Association spoken of is the County Common School Association. The law of New Hampshire

authorizes towns to make appropriations to defray the expenses of Teachers' Institutes.

The feeling of the Teachers who were members of the Institute was expressed in a series of resolutions adopted at the close, from which we copy the following :—

Resolved, That we, the members of the first Rockingham County Teachers' Institute, tender our grateful acknowledgments to the "Rockingham County Common School Association," for the rich social, intellectual and moral entertainment, which we have enjoyed through their zealous efforts and active liberality.

Resolved, That it is with pleasure we acknowledge our great obligations to our Class Instructors for the invaluable practical suggestions and information we have received from them—and also for their patient and unwearied endeavors both by example and precept to fit us for the high and responsible profession of Teachers.

Resolved, That we will strive by visiting schools and cultivating the acquaintances of successful and experienced teachers,—by attending school associations,—by reading publications on education,—by private personal study,—and by all other laudable means, to improve ourselves as teachers, that we "may be perfect, thoroughly furnished unto all good works."

Resolved, That the valuable instruction we have received here, shall not be lost upon us : but that, when we leave this Hall, where we have spent the last two weeks so pleasantly, and, we trust, so profitably, we will earnestly and faithfully devote ourselves to the exalted and sacred office of teaching, remembering that we teach not for time only, but for eternity—that we are to make impressions not upon perishable brass and stone, but upon immortal souls.

PARENTAL AND PUBLIC NEGLECT OF SCHOOLS. The low state of public sentiment on the subject of education, is the root of all the difficulties under which we are laboring. Reform public sentiment, and new life will be at once infused into our system of education, and our schools will be raised to a high degree of excellence. The public set a very low estimate on the education of the generation. Parents do not feel as they ought, the importance of knowledge and mental training to their offspring. Hence they take comparatively little pains with their education. There is a backwardness on their part, which is utterly incompatible with proficiency on the part of their children. It is their duty to see that their sons and daughters attend school every day, and at the appointed hour, unless there exists some insurmountable difficulty. It is also their duty to encourage them to study at home, and in every practicable way, to use such an influence as will make them feel that there is but one thing of more importance than study—and that is religion.

When parents feel these truths themselves, and when those who are not parents, feel the need of education to the young, then will be comparatively an easy thing to maintain good schools. For then will

those qualified to teach have inducements to make it their steady employment; then will the teacher's wages be in accordance with the importance and dignity of his vocation, the children will be well supplied with books, and school-houses will be such as they ought to be in location, construction, furniture and apparatus—the pupils will feel that to be absent from school one hour in six, is an evil most carefully to be avoided,—parents and others will show their interest by an occasional visit to the schools, (an event now unknown,) and the cause of education will advance at a rate never experienced, and not even conceived of, by a majority of the community.

For the School Journal.

American Dictionaries.

No. III.

In former numbers I gave an account of Dr. Webster's great work, the quarto edition of the American Dictionary of the English language, and of the same work somewhat abridged in the octavo form. I now propose to take a glance at two other abridgments of the book, one on a small scale, entitled "A Dictionary for Primary Schools," the other called the "University Edition, abridged from the American Dictionary," intended for those numerous classes of the community, who want for consultation something above an ordinary school Dictionary, but who are not disposed to purchase Webster's larger works.

Of the first of these it is not necessary to say much. It is on too contracted a scale to be of practical utility either in schools or families. Indeed it may be doubted whether such a work may not do more harm than good, as it can neither contain all the words likely to be wanted in the district school, nor furnish a complete definition of every term that it does contain.—Better that a child should consult the teacher, or the teacher's dictionary, than meet with frequent disappointments, either in his search after words, or after their true meaning. For example, I open a school-book at random (Russell's Introduction to the Young Ladies' Reader), and the following four lines are the first to strike my eye, p. 176:—

But hope can here her moonlight vigils keep,
And sing to charm the spirit of the deep:
Swift as yon streamer lights the starry pole,
Her visions warm the watchman's pensive soul.

Here we have a word in each line, for the true sense of which many a child will be at a loss. Let us see what satisfaction he will derive from consulting his school Dictionary.

VIGIL, *n.* the eve before a holiday.

SPIRIT, *n.* breath, immaterial substance, excitement; vigor.

STREAMER, *n.* a flag.

VISION, *n.* faculty of sight.

All these definitions are correct. But they are incomplete; and unhappily not one of them is suitable for our pupil's purpose. By examining either of the two complete editions of Webster, the proper definitions in this connection would have been found to be as follows: Vigil, *watch*; Spirit, *an immaterial, intelligent being*; Streamer, *a luminous beam or column,*

one of the forms of the aurora borealis; Vision, *something imagined to be seen, though not real.*

The dictionary called the "University Edition," though of course very much more complete than the one which purports to be a school dictionary, yet still has many deficiencies. Perhaps, in order to have a fair comparative view of it, it would be proper to present the definitions of the four words quoted from the smaller work.

VIGIL, *n.* [*L. vigilia*; *Fr. vigile*.] The eve before a holiday; a watch; * devotion performed in the customary hours of rest or sleep. *Vigils of flowers*, a term used by Linneus, to express a peculiar faculty, belonging to the flowers of certain plants, of opening and closing their petals at certain hours of the day.

SPIRIT, *n.* [*Fr. esprit*; *It. spirito*; *L. spiritus*.] Breath; immaterial substance; excitement; vigor; powers of mind distinct from the body; temper; disposition of mind; sentiment; perception; eager desire; animation; cheerfulness; essential qualities; a strong pungent liquor, usually obtained by distillation.

STREAMER, *n.* a flag or flowing pennon.

VISION, *n.* act of seeing; faculty of sight; a phantom.

Those of your readers who feel an interest in such inquiries will readily discover the defects in the above definitions. To others, it would be useless to point them out. I shall only add, that, in my opinion, it would have been better to have omitted the derivations, especially if that would have made room for more complete definitions. The former are doubtless important; but the latter are indispensable.

In conclusion it may be observed, that although the University Edition has been prepared for the especial use of "Teachers and higher classes in Public Schools and Academies," they would be better suited with one of the more complete works. Teachers, especially, should ever use the very best tools. They will always be found the cheapest in the end. P.

* Is there no danger of a pupil mistaking this for a time-piece?

Wages of Teachers.

Look at the average wages of Teachers in some of the pattern States of the Union. In Maine, it is \$15 40 per month to males, and \$4 80 to females. In New Hampshire, it is \$13 50 per month to males, and \$5 65 to females. In Vermont, it is \$12 per month to males, and \$4 75 to females. In Connecticut, it is \$16 per month to males, and \$6 50 to females. In Pennsylvania, it is \$17 02 per month to males, and \$10 09 to females. In Ohio, it is \$12 per month to males, and \$6 to females. In Michigan, it is \$12 71 per month to males, and \$5 36 to females. Even in Massachusetts, it is only \$24 51 per month to males, and \$8 07 to females. All this is exclusive of board; but let it be compared with what it is paid to cashiers of banks, to secretaries of insurance companies, to engineers upon railroads, to superintendents in factories, to custom-house officers, navy agents, and so forth, and so forth,—and it will then be seen what pecuniary temptations there are on

every side, drawing enterprising and talented young men from the ranks of the Teachers' Profession.—*Mr. Mann's Eleventh Report.*

How easy it is to prove that good teachers ought to receive higher wages! The superior talents and accomplishments of such as much entitle them to a corresponding advance of wages above the average, as superior ability in any other employment. Often, too, they have actually expended hundreds of dollars to obtain their superior qualifications, and as a matter of the simplest justice ought on that account to receive higher wages.

After all, however, the advance in the wages of teachers must be gradual, and will be the result, chiefly of their own efforts. They must labor and wait, trusting that the harvest will come; if not in silver and gold, in something better. And as to the silver and gold—as to the difference in wages between a good and an ordinary teacher, and a general preference of the former at a higher price—it must result from the conviction becoming general that *the good teacher is the best bargain*. The way to raise wages, is, for teachers actually to earn more. Let them work so wisely and faithfully as to make it palpable that the money given them is no adequate remuneration for their services. We could name young ladies employed as teachers in this State within three years, the services of one of whom would be dear at the price named by Mr. Mann as the average in Vermont, while those of another would be cheap at four times that amount. Let good teachers so manage their schools as to make this difference *felt*, and it will be the best possible means of raising the wages of all who deserve to be employed at all. If you would be paid more, earn more; and always resolve to leave among your employers the conviction that your services are worth vastly more than you get for them.—We know of no better—in truth we know of no other way to raise the wages of teachers. You cannot raise the wages of poor teachers by dint of argument; for the common feeling is founded on truth—they ought not to be raised.

THE RIGHT SPIRIT. The Great Falls (N. H.) Transcript of October 28, says:—

“At a meeting of voters of School District No. 3, in this village, at the Town Hall, on Thursday evening last, it was voted to build a school house 50 by 70 feet, two stories high, capable of holding upwards of 300 scholars. The Committee were instructed to purchase a lot containing two acres and four rods, situated just above the grove, on land owned by the Horn heirs, on which to build the house.”

This seems like appreciating the objects of a school house; and we especially like the two acres for play grounds.

IMPORTANCE OF STUDY IN YOUTH. If it should ever fall to the lot of youth to peruse these pages, let such a reader remember that it is with the deepest regret that I recollect in my manhood the opportunities of learning which I neglected in my youth;—that through

every part of my literary career I have felt pinched and hampered by my own ignorance; and that I would at this moment give half the reputation I have had the good fortune to acquire, if by so doing I could rest the remaining part upon a sound foundation of learning and science.—*Scott.*

Progress of Sound.

Sound of all kinds, it is ascertained, travels at the rate of fifteen miles in a minute; the softest whisper travels as fast as the most tremendous thunder. The knowledge of this fact has been applied to the measurement of distances.

Suppose a ship in distress fire a gun, the light of which is seen on shore, or by another vessel, twenty seconds before the report is heard, it is known to be at a distance of twenty times 1132 feet, or little more than four and a half miles.

Again if I see a vivid flash of lightning, and in two seconds hear a tremendous clap of thunder, I know that the thunder cloud is not more than 760 yards from the place where I am, and I should instantly retire from an exposed situation.

The pulse of a healthy person beats about 76 in a minute, if, therefore, between a flash of lightning and the thunder I can feel 1, 2, 3, 4 beats of my pulse, I know that the clouds are 900, 1800, 2700 feet from me.

ADVANTAGE OF HABIT. Bulwer worked his way to eminence—worked it through failure, through ridicule. His facility is only the result of practice and study. He wrote at first very slowly and with great difficulty; but he resolved to master the stubborn instrument of thought, and mastered it. He has practised writing as an art, and has re-written some of his essays (unpublished) nine or ten times over. Another habit will show the advantage of continuous application. He only works about three hours a day—from ten in the morning till one—seldom later. The evenings, when alone, are devoted to reading, scarcely ever to writing. Yet what an amount of good hard labor has resulted from these three hours! He writes very rapidly, averaging twenty pages a day of novel print.—*Bentley's Miscellany.*

They that govern most, make least noise. You see when they row in a barge, they that do drudgery work, splash and puff, and sweat; but he that governs, sits quietly at the stern, and scarce is seen to stir.—*Selden.*

TEST OF REFINEMENT. A writer lays it down as a fact that every really refined lady or gentleman speaks to a servant as kindly as to a friend. That's a good test. Where there is no kindness at heart, you can find no true refinement.

It may be that in every succeeding phase of our social condition, woman's sphere is proportioned to woman's merit. Let us increase the merit of woman, then, and trouble not ourselves about her sphere; it may be safely left to provide for itself.

Irregular Attendance.

Irregular Attendance is a prominent defect in our Schools. It has proved a fruitful source of discouragement, both to teacher and scholar, and has rendered the Schools immensely less influential and useful than they would otherwise have been. It presents an appalling obstacle to educational reform, and renders other improvements of doubtful utility. When a good school house has been erected, and a competent instructor procured, great exertions should be made to secure the constant attendance of the children at School, or these liberal expenditures will be wasted, and the fond anticipations of parents and friends be blasted. Provision has been made by the State for the education of its youth, and if this provision be neglected, a great wrong is inflicted upon the children, and community sustains a severe loss in the diminished amount of intelligence and virtue. Slight excuses should never detain a child from school, and parents should make every necessary sacrifice that their children may be punctual and constant in their attendance, and thus secure its valuable advantages. The neglect of this duty has proved a prolific source of misery, and has wrung many a parent's heart with anguish, when it was too late to repair the fatal consequences resulting from such neglect. Youth, who neglect the school, usually resort to places of amusement and dissipation, and there squander in idleness and vice those golden moments which should be spent in obtaining that preparation so important for the discharge of the duties of life. Children appropriately educated in the school, are ornaments of society; while those reared in the street, and in the tavern, become worthless to community, and perhaps scourges to the race. Children, by being detained from school, form habits of irregularity and inattention, which will follow them through life, and prove a great obstacle to their success. Such rarely become good scholars, for superficial attainments must of necessity result from frequent absence. The child, in order to make commendable progress in study, must advance by gradual and connected steps. Any lack of connection discourages the student, and scatters confusion along his path. All would condemn the teacher as unfit for his work, and insist that it would be utterly impossible for him to make thorough mathematicians, if he should occasionally skip over or omit an important elementary branch of this science. So far as the practical result is concerned, it makes but little difference whether the beauty and utility of a science is marred by an occasional omission of some elementary rule, or the pupil's absence from his place. The teacher may explain some difficult point, which is absolutely necessary for the advancement of the class, while several are absent. Hence, such explanations must be repeated, or they will group along in doubt, or becoming disheartened, give up in despair. No instructor should be reproached for the slow progress of his pupils, unless they are punctual; and it is cruel for a parent to blame his children for stupidity when he has so frequently detained them at home. Children detained for trifling purposes, infer that education is a matter of only secondary importance, and will

make but little exertion to secure it. It is a fact that should startle every citizen of the State, that nearly one third of the money raised for the purposes of education is literally lost through irregular attendance. — *Report of R. S. Rust, State Commissioner, New Hampshire.*

Lie not, but let thy heart be true to God;
Thy mouth to it, thy actions to them both.
Cowards tell lies, and them that fear the rod;
The stormy working soul spits lies in froth.
DARE TO BE TRUE. Nothing can need a lie.
A fault which needs it most, grows two thereby.

BUSINESS FIRST, THEN PLEASURE. A man who is very rich now, was very poor when he was a boy. When asked how he got his riches, he replied, "My father taught me never to play till all my work for the day was finished, and never to spend money till I earned it. If I had but half an hour's work to do in a day, I must do that the first thing, and in *half an hour*. After this was done, I was allowed to play; and I could then play with much more pleasure than if I had the thought of an unfinished task before my mind. I early formed the habit of doing every thing in its time, and it soon became perfectly easy to do so. It is to this habit that I owe my prosperity." Let every boy who reads this, go and do likewise, and he will meet with a similar reward. — *Anecdotes for Boys.*

Wisdom allows nothing to be good that will not be so for ever; no man to be happy, but he that needs no other happiness than what he has within himself; no man to be great and powerful, that is not master of himself.

Mathematical Questions.

Solution of the Question in No. 4, Vol. II.—Page 56.

4.5 = half of the base of the isosceles triangle given. $12^2 - 4.5^2 = 123.75 = \text{square of the altitude.}$
 $\sqrt{123.75} = 11.1243 = \text{altitude.}$ $11.1243 \times 4.5 = 50.0593$
 = area of the triangle given. $40 = \text{area of the triangle required.}$

Since the triangle given and the triangle required are similar, and the areas of similar triangles are proportional to the squares of their homologous sides, therefore,

$50.0593 : 50 :: 123.75 : 98.8623.$ $\sqrt{98.8623} = 9.9430 =$
 altitude of the triangle required. $11.1243 - 9.9439 =$
 $1.1804 = \text{difference of altitudes.}$ $1.1804, \text{ Answer.}$

Windham, Oct. 23, 1848.

AGRICOLA.

ARITHMETICAL CALCULATIONS. Some ingenious person of leisure has figured out that the present year has this singularity; it is divisible by no fewer than thirty different numbers. viz: — 2, 3, 4, 6, 7, 8, 11, 12, 14, 21, 22, 24, 28, 33, 42, 44, 56, 66, 77, 84, 88, 132, 154, 168, 231, 264, 308, 462, 616, 924. Next year will be the square of 43; while we have not had a "square" year since 1764, and the next which will occur will be 87 years after next year, namely in 1936.

THE AGRICULTURIST.

Vermont Agricultural and Horticultural Society.

The first annual meeting of the Vermont Agricultural and Horticultural Society was held at the Court House, Montpelier, on Thursday evening, October 19th, WILLIAM J. HASTINGS, Esq., Vice President, in the chair. After the reading of the Constitution and proceedings of the first meeting, Messrs. S. R. Hall, C. T. Hopkins, and J. W. Howes were appointed a committee to nominate officers for the ensuing year; and on their report the officers were elected as follows:—

President, CHARLES PAINE, of Northfield. *Vice Presidents*, Leonard Sargeant of Bennington Co., Geo. T. Hodges of Rutland, William Nash of Addison, H. S. Morse of Chittenden, S. W. Keyes of Franklin, Samuel Adams of Grand Isle, Ariel Hunton of Lamoille, William J. Hastings of Orleans, Roderick Richardson of Washington, J. D. Bell of Caledonia, R. C. Benton of Essex, A. B. W. Tenney of Orange, John Porter of Windsor, Mark Crawford of Windham.

Recording Secretary, E. C. TRACY, of Windsor.

Corresponding Secretary, C. T. HOPKINS, of Burlington.

Treasurer, Geo. W. SCOTT, of Montpelier.

Auditor, E. P. JEWETT, of Montpelier.

Executive Committee, Harry Bradley of Burlington, Francis Wilson of Hinesburg, Geo. W. Collamer of Barre, J. W. Howes of Montpelier.

Publishing Committee, C. Goodrich of Burlington, S. R. Hall of Craftsbury, David Reed of Colchester.

C. Goodrich, Esq., of Burlington, submitted the following Resolutions:—

Resolved, That we rejoice in the increasing prosperity of the County Agricultural Societies of Vermont, and that we earnestly invite the coöperation of their friends in a State Society, as a means of rendering their prosperity permanent, and their labors more efficient.

Resolved, That the improvement of our staples, the best direction of our industry in all its departments, and the adaptation of it to changing circumstances, are objects that may justly claim the continuance and increase of Legislative patronage.

Resolved, That the interests of the State require increased attention to the cultivation of fruits adapted to our soil and climate; and that, in order to the successful prosecution of this object, it is the duty of this Society to prosecute the necessary inquiries in regard to both native and foreign varieties, and to lay the results before the community.

Resolved, That measures ought to be taken to diffuse in a convenient form, and to preserve permanently, the information collected from time to time by the Agricultural Societies in Vermont.

Resolved, That the Executive Committee be requested to take such measures as they may deem expedient to obtain the aid of the Legislature in the prosecution of the objects of this Society.

Inquiry was made in regard to the condition of the County Agricultural Societies; and it was found,

from statements of gentlemen present, that in most of the counties they were increasing in prosperity.

The resolutions were then adopted.

J. W. Howes, Esq., of Montpelier, moved a resolution recommending the *Vermont State Agriculturist*, published by Mr. C. T. Hopkins at Burlington, to the attention of agriculturists throughout the State,—which was adopted.

On motion of Rev. S. R. Hall, it was voted that the proceedings be published in the Daily Journal and other papers friendly to the objects; and the Society adjourned.

The Society, it will be seen, intends to prosecute its objects, as indicated at the time of its organization. It will endeavor to procure the adoption of measures which may render the Legislative appropriation for the encouragement of Agriculture, &c., more productive of good—to aid the County Societies by making the best use of their labors, collecting, arranging, and publishing the valuable materials which they may furnish,—and to become a medium of intercommunication to the friends of improvement in all parts of the State, and between them and similar associations abroad.

The subject of *Fruits* is one particularly mentioned in the Resolutions, and which it evidently devolves upon a State Society to investigate. As many new orchards are about to be formed and nurseries are in progress in different parts of the State, the importance of a thorough investigation, such as the Society contemplates, must strike every one who is at all familiar with the dangers that beset the cultivator on every side. When one sets out a tree, and especially an orchard of trees, he does work for two or three generations. An error in selecting kinds, or the mistake of one kind for another, may easily make a difference of fifty per cent. in the profits, every year, for his own life and that of his children. Even with very limited means, the Society might be of immense benefit to the State in this respect; and we trust that a good beginning will be made during the ensuing year.

Pomological Convention at Buffalo.

The Pomological Convention held on the 1st, 2d, and 4th ult., was attended by delegates from nearly all the Eastern, Western, Northern, and Middle States, and a great variety of fruit was exhibited and discussed. Much may be done in time by these conventions in naming and classing the different fruits of the country, and eventually do away much of the difficulty that now exists.

The committee appointed to inquire into the expediency of calling future conventions, reported that,

Whereas the N. Y. State Agricultural Society in drawing together this present Convention, have brought together an assemblage of men and fruits which promises great advantage to the public at large, it is thought best to perpetuate the same; therefore

Resolved, That hereafter an annual assemblage or Convention shall be held under the name of "North American Pomological Convention."

Resolved, That this Convention shall be held in the

coming year of 1849 in the town or city in which the New York State Agricultural Fair may be held—to convene its session the first day succeeding the closing of the Fair—and that the Recording Secretary of the N. Y. State Agricultural Society shall be entrusted with the charge, and respectfully solicited to give due notice of the time of meeting, by means of Agricultural journals, and cards of invitation to gentlemen pomologists and Horticultural Societies throughout the Union and the Canadas, that they may send delegates or attend, and bring or send specimens of fruits for exhibition.

Apples. The following were voted first-rate: Golden Sweeting, Yellow (early) Harvest, Dyer or Pomme Royal, Early Joc, Early Strawberry, Sweet Bough, Sine qua non, Early Rose, Fameuse or Pomme de Neige, Rhode Island Greening, Green Newtown Pippin, Seek-no-Farther, Northern Spy, under careful pruning, Vandervere, Gravenstein, Fall Pippin, Late Strawberry, Swaar, Belmont Waxen, or Gate Apple, Northern Baldwin, Jonathan, Porter, Rambo, Hubbardston Nonsuch, Pomme Gris, Jersey Sweet, American Summer Pearmain, King of Pippin, Summer Hagloe, Yellow Roxbury Russet, and Lowell.

American Golden Russett or Bullock's Pippin, voted worthy of general cultivation.

Toot's Indian, or Indian Raripere, first-rate for cooking, second rate for table. Minister, second rate. Duchess Oldenburg, first rate for cooking, second rate for table. English Russett, as described by Downing, second rate. Twenty Ounce Apple, first rate in size, but second in quality.

The following were rated to be third rate fruit:—Augustine, Twenty Ounce Pippin, Beauty of the West, Red and Green Sweeting, Ribston Pippin, but second rate further to the north.

The Hawthorndean, Gloria Mundi, and Cornish Gilliflower, were rated unworthy of cultivation.

The English Sweet Belle Bonne, Wagner, Red Astracan, Yellow Bell-flower, Striped Gilliflower, and Detroit Red, were passed without action.

Summer Queen, the acid kind, was rated to be the true variety. The Pie Apple, or Warden's Pie Apple, was referred to the committee on seedlings, who afterwards reported that they supposed it to be a synonym.

Pears. The following were rated first rate. Tyson, Golden Beurre de Bilboa, Bloodgood, Marie Louisa, Glout Morceau, or Beurre d'Aremberg, Stevens' Genesee, Rosticzer, Bartlett, Dearborn's Seedling, Louise Bonne de Jersey, and Andrews, nearly first rate. White Doyenne, first rate in Western N. Y. and in some other localities.

The Cabot, Beurre Amalis, Cushing, and Laddling's seedling were voted to be of second quality.—The Washington was not considered first rate, but worthy of cultivation in large gardens.

The Julienne, Orange Bergamot, Brown Beurre, English Autumn Bergamot, Bezi de la Motte, were rated unworthy of cultivation.

The Honey, and Beurre Spence specimens were too immature to test their quality. Foster's St.

Michael, Heath and Oawego Beurre were passed without action.

Plums. The Washington or Bolmar, Purple Favorite, Green Gage, Red Gage, Imperial Gage, Diapree Rogee, Red Diaper, or Mims, Coe's Golden Drop, Jefferson and Blecker's Gage, were rated first rate. The La Royale was considered nearly first rate. The Diamond was considered third rate, and also the White Magnum Bonum, for the table, but first rate for kitchen. The Long Yellow or Yellow Egg was rated unworthy of cultivation.—*Literary Messenger.*

The County Agricultural Societies.

In most of the Counties the late annual exhibitions gave evidence of progress. Our limits do not admit of particulars in regard to premiums, &c., and those reports which are usually most instructive, have not yet been published.

At present we have only one suggestion to make, viz.: that a careful revision of the premium lists from year to year seems one of the first requisites in order to progress. The object is, not to distribute money, but to stimulate effort and diffuse information. To adopt a premium list to these ends, it must be varied from year to year; and more made to depend on an adequate account of cultivation, varieties, breeds, &c.

For the Vermont Agriculturist.

Remarks on Breeds and the Breeding of Cattle.

As Vermont is peculiarly a grazing State, it is important that our farmers should be well acquainted with the different breeds of domestic animals, and also with the principles of breeding. A knowledge of the former will enable the farmer to decide which breed will be best adapted to his location, and of the latter, to improve the quality of whatever breed he devotes his attention to. I will make a few suggestions on these two points with reference to neat cattle.

There are four principal qualities to be considered in neat cattle, and that breed which embraces the most of these qualities, is generally the best for our farmers to raise. First, thrift, or the capacity of keeping in good order and taking on fat with the least amount of food. Second, size and shape, with reference to beef qualities. Third, disposition, size, and shape with reference to work. Fourth, character for the dairy.

Of the established breeds, the Durham has probably been most extensively introduced into this country, and sustain as high a reputation as any in England. But because they are highly esteemed there, is no reason why they should be so regarded here; for the manner of keeping, food, &c., is widely different in England from what it is in Vermont. The qualities for which they are distinguished, are size, and abundance of milk. In shape, however, and build, they are deficient in the compactness which is desirable for the yoke, and have too much waste to make them desirable for the butcher. It requires a large amount of good to keep them in good order, and though their milk is abundant, it is not of a rich

quality. This breed may do very well on the western prairies, or in the southern states, where fresh feed is abundant the year round, but they are not well adapted for Vermont, where the herbage is less abundant and luxuriant, and all kinds of fodder bear a high price.

The Devonshire cattle are a hardy, thrifty breed, well proportioned, and of a beautiful color. They are compact, docile, and well adapted to the yoke.—They are, however, deficient in size, and have but ordinary dairy qualities. The Ayrshires have the reputation of being the best milkers of any breed, but are not so well adapted to grazing. They are characteristically not fleshy animals, (see *British Cattle*, p. 127. n.) and their carcasses exhibit a large amount of waste, when considering their qualities for the butcher. The Hereford breed are peculiarly the grazer's animal. They improve rapidly and mature early on medium feed. They are excelled for the yoke, if at all, only by the Devons, which in some features they strongly resemble. In England their reputation for the dairy is not so good as for other qualities, but in this country, where they have had a fair trial, they are found to yield a very rich quality of milk, and are seldom surpassed by other breeds in their dairy qualities. What is called the Native breed, has no fixed character. Among them are found individual animals, possessing all the desirable traits which can be found in any of the English breeds, and in some neighborhoods there are large families of excellent cattle, having some strongly marked characteristics in common. But very few if any instances occur where attention has been directed to securing particular desirable qualities through many generations, so as to fix those qualities indelibly in the race. This process, however, may be in progress in some sections, and if steadily and judiciously pursued for a series of years, may in time result in the establishment of races, as clearly distinguished for particular qualities, as any of the foreign breeds. The object could be more readily obtained, however, by the introduction of some of the established breeds possessing the qualities sought, and crossing them with our native cattle. As an example, the importation of some choice Hereford cattle into Massachusetts, by Admiral Coffin, nearly thirty years ago, may be referred to, which resulted in decided benefit wherever they were disseminated, and their breeding qualities are plainly developed in their progeny to the present day. (See the *Albany Cultivator*, Feb., 1847.)

Breeding cattle, with reference to securing particular qualities in a race, is founded on the principle that like begets like; and to effect the object, some rules must be rigidly and judiciously applied. Both science and experience is required. Some distinguished breeders have gone so far as to say they could breed to order, any quality of animals desired, and to a certain extent, they undoubtedly could. To accomplish the object, they must select such animals as their judgment and experience would convince them would unite in their offspring the qualities sought. From their progeny again must be selected only those animals which exhibit the requisite qualities most fully, and so on, generation after generation, until the char-

acter sought, is fully developed. The importance of continuing this process for a number of generations, is obvious, from the fact that peculiar marks or traits of character, often disappear in the first, and appear again in the second or third generation. The desired character may be found in the parent, and inherited by only a part of the offspring, and the requisite trait can only be uniformly developed, by a careful selection through many successive generations. In this process, it is apparent that the *breeding in and in* system must be adopted, but it is desirable at the same time to avoid close alliances. It is better that more distant members of the same family should be bred together, rather than those very nearly related. This system has been pursued, and from necessity, in establishing and giving character to the distinguished English breeds, and may be pursued in Vermont with like results.

Pairing should have strict reference to correcting the imperfection of one animal by a corresponding excellence in the other. The character of the parent is more fully impressed upon the offspring when the former is in the most vigorous period of life, and therefore neither very young nor very old animals should be selected for breeders. All the conditions of soil, situation, climate, treatment, and food should be favorable to the object sought, and particular care should be taken, for the first year at least, that the calves are well supplied with an abundance of nutritious food, and with comfortable shelter in stormy weather.

It is difficult, however, for any one man to carry out an extensive plan for the improvement of stock, or for the establishment of a breed, which shall retain a permanent distinctive character, but the plan may be carried into operation by an association of the farmers in the county. Let such an association be formed, and a selection made of the breed possessing most of the desirable points, with the understanding that the members of the association shall for a series of years continue to select and breed with reference to those particular points, exchanging animals with each other from time to time, and using all proper methods for improving the breed, and in process of time a family might be established which would retain its distinctive character permanently. The object of getting a breed, particularly adapted to our Green Mountains, is an important one, and well deserving the consideration of our County Societies, through which organization the plan might be successfully carried into execution.

Many excellent suggestions in regard to breeding, raising, and the general treatment of cattle, are found in the following works, viz:—*Treatise on Cattle*, by Youatt; *Domestic Animals*, by R. L. Allen; *Compend of American Agriculture*, by the same author; *Diseases of Animals*, by S. W. Cole. The latter, a volume of nearly 300 pages for fifty cents, should be in the hands of every farmer, and the two works by Allen costing five or six shillings each, are worth as many dollars to any one engaged in agriculture.

AGRICOLA.

An Irish paper mentions a cabbage four feet high, sixteen feet in circumference, and weighs fifty pounds. Google

Method of Ascertaining the Weight of Cattle While Living.

This is of the utmost utility for all those who are not experienced judges by the eye; and by the following directions, the weight can be ascertained within a mere trifle. Take a string, put it round the breast, stand square, just behind the shoulder blade; measure on a foot rule the feet and inches the animal is in circumference; this call the girth; then, with the string, measure from the bone of the tail which plumbs the line with the hinder part of the buttock; direct the line along the back to the fore part of the shoulder blade; take the dimensions on the foot rule as before, which is the length; and work the figures in the following manner: Girth of the bullock, six feet four inches; length, five feet three inches; which multiplied together, make 31 square superficial feet; and that multiplied by 23 (the number of pounds allowed to each superficial foot of cattle measuring less than seven and more than five in girth,) make 713 pounds. Where the animal measures less than 9 and more than 7 in girth, 31 is the number of pounds to each superficial foot. Again, suppose a pig or any small beast should measure two feet in girth, and two along the back, which multiplied together, make 4 square feet; that multiplied by 11, the number of pounds allowed each square foot of cattle measuring less than 3 feet in girth, makes 44 pounds. Again, suppose a calf, a sheep, &c., should measure 4 feet 6 inches in girth, and 3 feet 9 inches in length, which multiplied together, makes 15½ square feet; that multiplied by 16, the number of pounds allowed to all cattle measuring less than 5 feet, and more than 3 in girth, makes 265 pounds. The dimensions of the girth and length of black cattle, sheep, calves, or hogs may be as exactly taken this way as it is at all necessary for any computation or any valuation of stock, and will answer exactly to the four quarters, sinking the offal, and which every man, who can get even a bit of chalk can easily perform.—*Chambers' Information for the people.*

For the Vermont Agriculturist.

Hydraulic Ram.

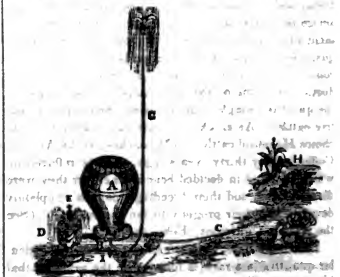
The account of the Hydraulic Ram, given in the July number of the Agriculturist, will doubtless be very acceptable to many of the readers of the paper, as it has been to me; but as no description is given of its mode of operation, or cause assigned why any portion of the water employed should rise above the fountain-head that sends it forth, and as I am acquainted with some men on other matters well informed, who think it is asking a *kettle* too much of them, to expect them to believe that water can be made by its own force alone, to run up hill, I have thought that some explanation was needed; and under the impression that something of the kind would be acceptable to the readers of the Agriculturist, I have ventured to give, in "homespun," what I understand to be the cause of any portion of the water rising above its natural level, by the agency of the Hydraulic Ram.

Any person familiar with water works, must have noticed, as did Montgolfier, who invented the machine

some fifty years since, that water passing through a pipe in an ordinary manner (the greater the velocity, of course the greater the effect) and receiving a sudden check, such as it would receive by suddenly shutting a stop-cock, produces a sensation similar to that produced by striking a blow with some hard substance on the end of the pipe; and this is in reality the case—the whole volume of water contained in the pipe, set in motion by the opening of the stop-cock, is now met in its course by the closed stop-cock—a blow is struck by the water, as truly as if it had been in the condition of ice, moving through the air at the same velocity, and had met in its course with some obstacle sufficient to stop it. Any person acquainted with the familiar operation of a hammer, knows that a much greater effect is produced by the blow of the hammer on the head of a nail, than what is produced by simply allowing it to press with nothing but its own weight upon the nail. The power, which the hammer and the water have acquired by being put in motion, is called the *momentum* of the moving body.

The *momentum* which the hammer has acquired, produces its effect upon the nail, and forces it into the timber into which it is designed to drive it—the *momentum* which the water has acquired, produces its effect in the Hydraulic Ram, upon that portion of the water which it is designed to raise to the point intended.

I do not remember having seen at any time one of the Hydraulic Rams with Douglas' improvement—indeed, the plate is so much like the one published in Nicholson's Journal forty years since, that I am at a loss to discover in what the improvement consists, except it be in some respects more compact and less costly. But as the plate published in the Agriculturist answers for those that I have seen, I will endeavor



or to proceed. The Ram, B, is a hollow vessel of metal, mostly cast-iron, having two apertures on the upper side, the one marked E, being closed by a valve that opens downwards, and of course inwards,—the one in the air vessel A, but not seen in the plate, closed by a valve that opens upwards, and into the air vessel. The valve E is so loaded, if it is not of itself sufficiently heavy, that when the water in the drive pipe C is at rest it overcomes the pressure from within, and opens—then commences a rush of water along the drive pipe and Ram, increasing in velocity

until the force it has acquired is sufficient to lift, and consequently to shut the valve E. The momentum thus generated, must be disposed of—if no passage is provided for a portion of the water, it opens itself a passage.* But a passage is provided through the valve concealed in A.—the valve opens—a portion of the water passes through into the air vessel—the momentum subsides—the water in the drive pipe becomes again at rest—the valve E. again opens as at first—another rush, another stoppage occurs—the compressed air in the air vessel A. acting by its elastic property on the water, which by this time is passing up through the pipe G., keeping up a continuous stream there, while the intermitting power is at work in the Ram, below.

P. S. I have annexed a copy of the plate in Nicholson's Philosophical Journal, of Montgolfier's Water Ram (Belier) and have made the letters of reference correspond with those in the Agriculturist. The difference in the capacity of the two feed pipes will at once be perceived—the larger one of Montgolfier I should prefer, the friction on the sides being, in proportion, less. H. M.

* An illustration of this was given at the saw mill near Wainwright Foundry, Middlebury. The trunk which was laid down when the mill was built—which was strong enough to resist the pressure of water under the usual head, and would have answered the purpose for which it was intended, with the addition of a pipe rising to the level of the head water, through which the momentum could have expended itself at the shutting of the wheel gate; but, for the want of that lawful outlet, it found its way, very unceremoniously, through the sides of the trunk, occasioning what I thought to be a needless cost in putting in a stronger trunk.

REMARK. It is not convenient to insert the drawing sent by our correspondent, and it is unnecessary, the principle of all the Water Rams being the same, and sufficiently illustrated by the drawing of Douglas's. The feed-pipe of Montgolfier is much larger. Drawings of several forms of the Ram may be found in Ewbank's Hydraulics, pp. 368, 370.

EDITORS.

To train a Shy or Skittish Horse.

"Never strike him for swerving as this will increase his fears; but gently rub him in the face, and walk by the side of his head to the cause of alarm, and let him examine it; then go back and let him slowly approach the object again: repeat if necessary. We were once training a high spirited and skittish colt, and he stopped with affright at a lock of hay in the road; we gently led him to the frightful object, and allowed him to eat it to show him his folly. Notwithstanding his spirit and shyness we taught him to stop short or lie still at the word *who*, (long a, that he might distinguish from the word *go*) on any emergency, even if lying uncomfortably in a snow bank; and we taught him to stop suddenly, whenever the harness broke or halter fell, even when travelling rapidly in a dark night.

Lead a horse carefully over bridges till his shyness abates; but if he continuously, always lead him over bridges that are not well railed, when you have any

person in the carriage, as lives have been lost by horses springing suddenly from bridges and plunging into the stream."—*Cole on Diseases of Animals.*

Wool.

PRICES OF WOOL—PROSPECTS FOR THE WOOL GROWER.

The following correspondence is from Mr. Skinner's new journal, *The Plough, the Loom, and the Anvil.*

MOORE'S SALT-WORKS JEFFERSON CO., OHIO.

DEAR SIR: I hope it will not be offensive to you in finding one addressing you with whom you have no acquaintance. I desire some information in reference to the wool market, and can think of no person at present whose opinions would be entitled to more consideration than yours. I mean not only the present value, but the prospective value some years to come.—In 1840 I purchased one hundred native ewes; with these and their progeny I have bred from the best merino bucks I could procure. My present stock is, say twelve hundred; a few of the original stock are living. Taking my whole lot together it is tolerably nice wool. Last year it brought twenty-nine cents cash; this year I sold it at twenty-seven and a half.

But the purchaser could not raise the cash, and I did not choose to let him have it. —, of Stubenville, offered twenty-six cash; I declined taking it. It is understood that you are not purchasing any wool this season; what does this mean? Will the article advance this winter? The Washington county wool is all on hand, and cannot be got without advanced prices. Is the supply too large for the demand? If so, will not the market sink still lower every subsequent year? Would it be advisable to abandon the business at once? I will be pleased to have your views at large on the subject. If wool is destined to range with this year's prices, I can do much better with my lands than pasturing sheep.—But I lack foresight! I feel discouraged in the business. I have heard men say they could raise wool at twenty-five cents. Those believing this may do so. I cannot and will not.

Yours, truly,

R. G.

Mr. SAMUEL LAWRENCE.

LOWELL, SEPTEMBER 26, 1848.

MY DEAR SIR: Your highly valued favor of the 17th is at hand, and I beg to assure you that I have much pleasure in replying to your queries, and in giving you such information relating to the great branches of national industry in which we are both engaged as in my power. The reasons for the great depression in the woollen manufacture of this country are obvious. A short crop of food in 1846, in Great Britain, caused a famine in 1847, and a greater commercial crisis than has been for fifty years on the other side of the water. This caused a very large exportation of manufactured goods to this country, as they could not be consumed at home. Then came the last winter and spring the political and financial troubles on the Continent, with similar effects on consumption and exports to this country. For the last eighteen months this country has been inundated with

foreign fabrics, not one-quarter of which were needed for comfort or luxury. The quantity of French and German broadcloths sold in New York the present year is perfectly enormous, and would amaze the wool-growers were they possessed of the fact. These goods have sold generally at great sacrifices, which fell on the creditors of the makers and shippers, who had become bankrupt. Our own manufactures have suffered severely by the great fall of goods, prices of which were never so low as at this time. Our own stock of goods was so large that we stopped a portion of our works, and discharged over a thousand hands.

This kind of thing cures itself, and my belief is firm that another year will show a greatly improved state of things. Whether wool will advance in price the coming winter or not, is beyond my judgment; but I have no doubt it will be higher within a year. The supply of domestic wool is not above the machinery. The clip of 1847 was entirely worked up. Do not for one moment entertain the idea of abandoning the business; instead of which make preparations to go on increasing. All the old and new machinery will be in full operation within one year. It would be about as wise for us to send our horses to Europe to be shod, as to depend upon importations of woolen goods. It depends upon the wool-growers of this country how far the business of fabricating shall be carried; give us the wool at German prices and we shall soon supply ourselves.

The woolen manufacturer is in a relative position to the wool-grower as the miller is to the wheat-grower. The amount invested in sheep-farms and sheep in this country is *more than four hundred millions of dollars*, while not over one-twelfth of that amount is the cost of woolen-mills, machinery, &c. It therefore rests with those representing these hundreds of millions of dollars to decide how far their interests shall be extended. Strike the woolen interest out of existence in this country, and what would be the value of the lands for the production of food?

The producers of food in this country obtain a foreign market only in seasons of famine, and I ask you if it is safe for so great an interest to depend for their property on the frowns of Heaven. Would it not be wiser to make a market at home, and calculate how much food there is in the hundreds of thousands tons of iron now imported yearly, which could as well be made here. Our Government is the cheapest and best in existence, and we have the elements of prosperity beyond that of any nation of which there is a record. Let us all aim to make our beloved country glorious. Believe me, your obedient servant,

SAM. LAWRENCE,

R. G., Esq., Moore's Salt-works, Jefferson Co., Ohio.

LOWELL, SEPTEMBER 28, 1848.

MY DEAR SIR: Since Bishop Campbell assumed the guardianship of the fine wool interest of this country I have looked on as an amateur. You are aware that for a great many years previous I gave that branch special attention. If the Bishop has not informed you, it was his duty to do so, that the French Government, and Belgian also, are allowing high bounties on the exportation of their manufactured woollens; and all

goods are made of wool from these countries imported in this way, say—

An article costs in Havre,	\$ 100,00
Bounty,	12,00
	88,00
Duty 30 per cent,	26,40
	114,40
Should be, cost,	100,00
Duty,	30,00
	130,00

I believe the bounty is 134 per cent, but am not sure. The woolen manufacturer is to the wool-grower, precisely in the same relative position as the miller is to the wheat-grower. In sheep and sheep-farms in this country four hundred million dollars are invested; in woolen mills and machinery thirty millions. Who is to look into this matter? [The wool grower or the manufacturer?] Our form of government is the cheapest and best in existence, but is policy its far more unnatural than that of the ostrich. The prosperity of our glorious country depends quite as much upon the success of the wool and woolen interest as upon any other great branch of national industry. Let this interest droop and the whole country would feel it. Our food producers think a great deal of exporting to Europe, which only happens in times of short crops.—Let them rather calculate how much food is consumed in the manufacture of a yard of broadcloth in our own country, carrying the whole thing out in its various ramifications. I would make any reasonable sacrifice to sit down with you and some others and discuss this thing. Something must be done to put the country on the right basis. There is a jealousy in many parts of the country against manufactures—their influence is comparatively nothing. The agriculturists control the country, and should do. This is right; only pray move and with energy for the paternal care of American industry.

I remain your friend and obedient servant,

SAM. LAWRENCE.

R. R. R., Esq., Washington, Pa.

Swine—Improved Breed—Management.

Professor Wilkinson, of Mount Airy Institute, who for the past twelve years has devoted much time and attention to the breeding and management of swine, has furnished us some facts in his experience, which may be of interest to our readers.

He commenced in 1836 by crossing the Berkshire and Leicestershire breeds, and has selected his breeds from his entire stock with the greatest care and attention. In his selections, he observes, "I have always been guided by the following characteristics, viz:—First. Those that were white, or nearly so, great length and rotundity of body, small and short head, ears, limbs, and tail, little hair, thin clear skins, greatest tendency to fatten, quiet, docile dispositions; and I congratulate myself on my success, in which I feel that I stand unrivalled in this country."

As evidence of this we would refer our readers to the reports of the Agricultural Society of Dutchess

County, and to farmers in various parts of the Union, who have had of his stock. For tenderness of meat they cannot be excelled, for they have a very delicate muscle, and from their quiet disposition, they form no more than what is necessary to enable them to walk from the bed to the trough and back again, which is the extent of their travel. The practice of Mr. W. is to keep them in close pens constantly, and feed them with plenty of charcoal, salt all their food, and give them about a teaspoonful of sulphur, once a week. He washes them with soap suds once a month, and if any of them are chapped or inclined to scurf, he applies to the part affected, skimmings of boiled meat, which have the effect to keep their skin smooth and flexible; this we consider very essential to thrift. He is also in the daily practice of having them brushed with a stiff whalebone brush, which he regards as of essential service, and believes that there can be nothing done for them by the way of care, that is more profitable, if particular care be taken to brush the issues on the inside of the front legs.

He observes: "We now keep them in separate pens, and I am well convinced that their additional thrift will pay the expense of the necessary partitions in the main better than to form the single ones, at least three times a year, besides the great amount of feed saved that is generally wasted when a number are kept together, by fighting each other from the trough. I have also made another great saving of expense by the use of the *iron trough*, which I was induced to substitute for the plank ones, on account of their being so soon destroyed by the gnawing of the hogs, and I am satisfied that they will prove vastly more economical than the wooden ones. They cost but \$1 each, and I see not why they will not last a century or more, for I have had them so constructed that if they should be filled with water and frozen solid, they will not break."

Professor W.'s pens are built of wood, with thatched roofs, and the divisions are about $6\frac{1}{2}$ + 10 feet for each hog. The floors, which are of narrow plank, are laid quite open, and are a sufficient height from the ground to admit of the fine rubbish which falls through between the floor plank, being scraped out with a long handled hoe. All the fluid matter runs directly into the liquid manure pool, which is emptied by the use of the liquid manure cart, as often as it is filled, putting it on the vegetable garden and field carrot and turnip ground.

Mr. W. further observes: "The roofs slope but one way, and the pens front to the south, so that the sun shines directly into the pens more than half of the day, this is very essential, particularly for young pigs. Oats or buckwheat straw should never be used for littering the sty, as they will both poison hogs which have a delicate skin. The brood pens should always have a slat or scantling nailed firmly to the studs about six inches from the floor, which effectually prevents the brood sows from lying on their young. Small pens are preferable to large ones, as they produce that quiet so essential to thrift. The oftener the food is changed, the better, but care should be taken not to supply them with a superabundance of laxative food, for in such cases the nutriment is not fully

extracted before it is excreted, hence, a waste of pabulum.

"The only cerealious food which I feed my pigs under six months old, is what is here called 'mill feed,' which is the refuse of the wheat flouring mills; it costs but 25 cents a bushel, and is in my opinion much more economical as well as healthier than corn for growing pigs. All kinds of grain should be ground and steeped until it ferments slightly for swine, and in cold weather it should be warmed to blood heat; this may be done at a very trifling expense with a properly constructed steaming apparatus, or other contrivance for the purpose."—*Farmer and Mechanic.*

The Markets.

FANEUIL HALL MARKET.

WHOLESALE.					
Beef, fresh, lb.	7 a	12	Apples, barrel,	1 50 a	2 50
Mutton, 1st qual.	6 a	8	do. dried, lb.	0 00 a	0 00
2d "	5 a	7	Beans, bush,	1 50 a	1 75
Lamb, "	5 a	10	Peas, bush,	0 00 a	0 00
Veal, lb.,	6 a	10	Potatoes, barrel,	2 00 a	2 75
Pigs, roasting,	1 00 a	1 25	New,	2 00 a	2 75
Chickens, pair,	75 a	1 00	Common,	3 00 a	0 00
Turkeys,	50 a	1 25	SEED—RETAIL.		
Geese, mongrel,	1 25 a	1 50	Clover, North, lb.	10 a	12
Pigeons, dozen,	1 00 a	1 25	Southern,	8 a	9
Pork, per 100 lbs.	5 50 a	6 50	White Dutch,	00 a	25
Lard, best, pr. bbl.	9 00 a	00 00	Lucerne, or French,	33	
Western, keg,	9 00 a	10 00	Herdgrass, bush	3 25 a	3 50
Butter, lump, lb.	23 a	27	Red Top, bush,		
do. firkin,	15 a	23	Northern,	1 25 a	0 00
Cheese, new milk,	8 a	10	Southern,	65 a	88
do. four meal,	5 a	6	Orchard Grass,	— a	2 50
Eggs, doz.	18 a	20	Fowl Meadow,	2 50 a	0 00

BOSTON, OCT. 28. WHOLESALE PRICES CURRENT.—Flour—The advices from Liverpool to 14th Oct. represent Flour as having declined about 1s. per bbl., and it was quoted at 30s. 6d. and 32s. for sweet, and 28s. a 29s. for sour. Our market has not been affected by the news, the supply being moderate, and the demand good. Genesee, good pure brands, are selling at \$5.75; Ohio and Michigan, \$5.62½.

PROVISIONS—Prices are not so firm as they were, and a decline has been experienced on Beef, and some qualities of Pork. Western Mess Beef has been selling at \$12 a 12.50, Eastern do. \$11 a 11.50; Mess Pork, \$12.50 a 13.50; clear do. \$14.25 a 14.50; extra clear, \$15; prime, \$9.75 a \$10 per bbl., cash and 4 mos. Lard in barrels, 8½ a 9c; kegs, 9½ a 9½c. per lb., 4 mos. Butter is more plenty, and prices rather on the decline.

The advices per Europa show a decline in Provisions in Liverpool, and it has had the effect of reducing prices in our market about 50c. per bbl.

Butter, shipping,	13 a	15
" store,	13 a	15
" prime family,	18 a	20
Cheese, new milk,	6½ a	7½
" four meal,	5 a	6
English Dairy,	10 a	12½

WOOL—DOMESTIC.

Prime Saxony Fleeces, wash'd lb.	37 a	38
American full blood do	33 a	35
do 1-2 a 3-4 do	28 a	30
do 1-4 and com. do	23 a	25
Lambs, Superfine,	28 a	29
Do. No. 1,	22 a	25
Do. No. 2,	16 a	17
Do. No. 3,	10 a	12

FOREIGN.

Smyna, washed,	17 a	20
Do. unwashed,	9 a	14
Bengazi,	8 a	9
Buenos Ayres,	6 a	15
Crimea,	6 a	9
Mexican,	12 a	13
Barbary,	25 a	—

American Fleece Wool is in moderate demand at quotations.—*Daily Advertiser.*

Training of Horses.

To make a Horse follow you. You may make any horse follow you in ten minutes; go to the horse, rub his face, jaw, and chin, leading him about, saying to him, "come along;" a constant tone is necessary. By taking him away from persons and horses, repeat rubbing, leading, and stopping. Sometimes turn him round all ways, and keep his attention by saying, "come along." With some horses it is important to whisper to them as it hides the secret and gentles the horse; you may use any word you please, but be constant in your tone of voice. The same will cause all horses to follow.

To train a Horse to the Saddle. You may begin by showing him the blanket, rubbing him with it, and throwing it on his back; in a short time you may lay the saddle on, and, after fondling him a few minutes, you may fasten it, and ride him with safety. It is better for one person to stand by his head at first, and keep him quiet, and then to lead him along until all danger is over. If he is dangerous, you may exercise him for some time by leading him, as he becomes more and more gentle in working. You can then manage him with more safety. It is better to work a horse to make him very gentle.

To train a Horse to the Harness. You must be very gentle with him. You may commence by throwing a rope over the back and letting it hang loose on both sides; then lead him about, carressing him, until he becomes satisfied that it will not hurt him; then put on the harness, and pull gently on the traces. In a short time, by this kind treatment, he will be prepared for work.

To stop a headstrong Horse. Connected with the reins, have a covering, that by a spring, may be suddenly thrown over his eyes, which will blind and stop him. Or have extra reins extending from the top of the headstall through rings on the hames, near the top, or D's in the saddle. Put a narrow or round strap under the throat, and fasten to these reins, on each side, bringing the reins down low. On drawing these reins the strap will choke and stop the horse.—*Domestic Animals.*

TO TRANSPLANT LARGE TREES. I have these taken up with roots as large as possible, and with as little injury as I can; with a sharp saw, or pruning-knife, according to the size of the roots, the bruised ends are nicely cut off, which enables them, when planted, to throw out numerous little rootlets from the ends, thus giving a quick and vigorous growth. The holes were 4 to 6 feet in diameter, and 1½ to 2 feet deep, a good layer of soft rich mold was then laid on the bottom for the roots to rest on, and filled in with the best soil to the top, and the earth carefully laid up somewhat rounding about the trunk. I have set thousands of trees in my life, and wherever I have pursued this method, with proper attention afterwards, I have rarely lost one. Let every one remember that a fruit or shade tree, well set out and started to grow, is worth at least from one to five dollars the moment its life is secure; and all due pains in planting is the strictest economy in the end.—*Horticulturist.*

EFFECTS OF STOPPING AND THINNING. Scarcely an Annual exists, which usually dies at the close of the season after ripening its seed, but may be made to retain a vigorous existence, if its inflorescence be removed as soon as formed. Mignonette is a very familiar example, for this may be allowed to bloom; but if its flower-stalks be cut down before its seed-vessels be perfected, it becomes woody and shrubby, and will live and bloom for three or more successive years; but if allowed to ripen its seed, it dies the same year.—The common Nasturtium is an Annual; but the double Nasturtium has become a Perennial, because its flowers, deprived of the faculty of producing seeds, do not exhaust the plant. And it is probable, that every Annual, rendered double by cultivation, will become a Perennial.—*Johnson's principles of Gardening.*

CAUSE OF DARK COLOR OF THE SKIN. Darkness of complexion has been attributed to the sun's power, from the age of Solomon to this day. "Look not upon me because I am black, because the sun hath looked upon me;" and there cannot be a doubt, that to a certain degree, the opinion is well founded. The invisible rays in the solar beams, which change vegetable color, and have been employed with such remarkable effect in the Daguerreotype, act upon every substance upon which they fall, producing mysterious and wonderful changes in their molecular state, man not excepted.—*Mrs. Somerville.*

TO MAKE SHOES WATER PROOF. Take bees wax, tallow or mutton suet, equal parts, rosin, a tenth part of the whole, melt and mix together, apply hot to your husband's shoes, and they will last twice as long, and he will never complain of wet feet; the leather will absorb a quantity of the mixture, and it must be applied hot, until the shoes are thoroughly saturated, both soles and uppers.

TO CLEAN OIL PAINT. The best thing for cleaning oil paint is a sponge, dipped in ammonia, which has been copiously diluted with water. Soap dissolves the turpentine as well as the linseed oil, and not only destroys the smooth and shiny surface but exposes also the white lead to the influence of the water and air.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,
and sent to subscribers on the following

TERMS:

For a single copy, - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " - -	3 00
16 " " " " - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. II.

WINDSOR, VT., DECEMBER, 1848.

No. 8.

THE SCHOOL JOURNAL.

For the School Journal.

An Address

TO THE SCHOOL CHILDREN IN WINDHAM COUNTY.

MY YOUNG FRIENDS:—I wish to address to you a few words, in order to interest you in your schools, and induce you to learn as much as possible this winter. The State is at much expense, and your parents are at much expense to send you to school; but it will all do no good, unless you do something yourselves. I know you all wish to learn; but what must you do to learn in your schools this winter?

1. First, if you would learn well, you must come to school,—come in season in the morning, and come every day. Let the teacher see your bright eyes, and cheerful faces, in the school-room by nine o'clock in the morning. If you have work or chores to do at home, get up early and do them before school. Do not be afraid of the cold, or the snow, for laziness will do you more harm than the cold or the snow.—*Do not stay at home a single day, to visit, or to play, or even to work, unless you are obliged to.* Scholars who do not like study, sometimes tease their parents to let them stay at home: but you, if you are good scholars, will rather tease your parents to send you to school, as they will wish to do, if they see you anxious to learn. How many of you will try to be at school every day, and by nine o'clock? How many?

2. Again, if you would all learn well at school this winter, you must behave well. If your minds are continually upon your mischief and sport, they cannot be upon your books. A noisy, saucy, disobedient scholar, will neither learn himself nor suffer others to learn. Do not compel your teacher to spend his time and strength in governing unruly scholars, but do you all govern yourselves, and let your teacher spend his time in giving instruction. Do not whisper. Do not try to whisper. Do not study loud, or ask to speak, and leave your seat too often. Obey all the rules of school cheerfully, and then you will love the school. But if you are cross, fretful, and disobedient, you will dislike the teacher, dislike your books, learn nothing, and thus cheat yourselves out of your winter's schooling. Besides, if you are bad boys and girls at school, you will, most likely, be bad boys and girls at home, and bad men and women when you grow up, and perhaps some of you will get into the State-Prison, for those who go to the State-Prison, begin to be bad at school.

3. Once more, if you would all learn well at school, you must all study, and be engaged in study. No matter how much your teacher does for you, or how much your parents do for you, they cannot make you learn, unless you study. Do not spend your time in gazing about the school-room, in watching the teacher and the scholars, or in dreaming and building "castles in the air," but study your books. Study your books, not doze over them, as many scholars do, half-asleep and half-awake. Study with your eyes open, and with your minds, as well as your eyes, on your books.

Take your books home with you, and study evenings; for it is better to spend your evenings in improving your minds than in folly and dissipation. If your mind is off your studies out of school, it will most likely be off your studies in school too. Study, be engaged in study, and you will then love to study. The way to love study, is to study. Idle scholars dislike their books because they study so little. They are so idle, and so lazy, they do not get through the husks and shells of knowledge, and so get nothing of knowledge to eat but husks and shells; but if you will only study, only work, so as to crack the shells, and get off the husks of knowledge, you will then find the kernel and the fruit of knowledge most sweet and delicious to the taste. No, knowledge, if you only find it, is

"Not harsh and crabbed, as dull fools suppose;
But a perpetual feast of nectared sweets."

4. I have now told you that if you would all learn well, you must be punctual at school, and then behave well, and study. Let me now ask you all to be present at the examination, or close of school. Scholars many times absent themselves from the examination. Some do it because they have not learned very well, and are ashamed to come; some perhaps are sick, and some may pretend to be sick; some, too, get mad, and so stay away to vex the teacher, forgetting that they only disgrace themselves and their parents. But I hope you will all learn so well, and behave so well, that you will be willing to come to the examination of your school, and to ask your parents to come with you.

Remember, my Young Friends, you will very soon be men and women, and that if you would be happy, useful, and respected, then, you must improve your minds, and form good habits, now. Learn, now, to govern your temper, and to govern your tongue.—Speak no saucy, vulgar, or profane words. Be not harsh, cruel, boisterous, rude, or selfish; but be kind to all. And be sure you always treat your elders

with respect. Never be ashamed to do right—to fear God—to speak the truth—to obey your parents and your teacher; but be always afraid and ashamed to do wrong, as Washington was. If you would be good men and women, you must be good children. Washington was a good man because he was a good child; for the habits which made him so great and so good a man, he formed in youth. The habits you form now will go with you, to make you good or bad, happy or miserable, through life. The seed you sow now, you will reap. If you sow thorns, you must reap thorns.

Your mind is a garden,—a garden of weeds and thorns, or of fruits and flowers, according as you sow in youth. Shall the garden of your mind be filled with poisonous weeds, and thorns to tear your flesh, or shall your mind be a garden of all sweet flowers and pleasant fruit?

My Young Friends, I wish you all a pleasant and profitable school, this winter. JAMES TUTTS,
Supt. of Com. Schools for Windham Co.
Wardsboro, Nov. 1848.

N. B. Teachers in this County are requested to read this address in their schools.

Parents and Children.

By these and for these the great apparatus of school houses, school books, school masters, with superintendents and committees—time, labor, money, are provided; and all Vermont is about to engage in another campaign against the reign of ignorance and impotence. "Were it not a cruel thing," exclaims Carlyle, "to see in any province of an empire, the inhabitants living all mutilated in their limbs, each strong man with his right arm lamed? How much crueler to find the strong soul, with its eyes still sealed, its eyes extinct, so that it sees not!"

Let us work together to open wide the eyes of these strong souls in Vermont!

One of our County Superintendents has sent us an Address to the School Children of his County, which we are glad to publish; and which we recommend to be read in every school in the State. It is as well adapted to one county as another.

We have before us, from the same source, an Address to Parents. We have not room for the whole; but the few hints below must have a place:

1. Scholars often lose half their time in school for want of books, or *SUITABLE* books. To make progress, your children should have the books used in school, so that the scholars may recite in classes. To be sure, it is some expense to buy books, but it is more expensive to send your children to school without books, if you regard the education of your children as of any consequence. It is as poor economy to send your children to school without books, as for the farmer to send his men into the field to work with no tools, or with poor tools.

2. Will you, as parents, see that your children attend school *punctually*, and *regularly*? In Massachusetts and New York, it is estimated that one-third of the schooling is lost, on account of the irregular attendance of scholars,—and the loss is probably as great, if not greater, in Vermont. Now this ought

not to be so, and need not be so, if parents would do their duty. Our schools are too expensive, and education is of too much consequence, to have a third of our schooling thrown away, and the value of the remaining two-thirds greatly diminished, through the neglect of parents to send their children to school.

If your children are a half hour, or an hour too late in the morning, and then are allowed occasionally to stay at home a day to visit, or to play, or even to work, they will not learn much at school; and what they do learn is only half learned. Besides, tardiness and absence from school discourage the teacher, destroy all interest in the classes, and produce disorder and confusion in the whole school. The tardiness or absence of one scholar is an injury to all the scholars. In Prussia there is a law requiring parents to send their children to school. But no law can correct this evil in Vermont. Parents must correct the evil *themselves*, and until they do, there can be no great improvement in our common schools. If you would have your children improve, send them *punctually* to school in the morning, send them the *first day* of school, and, if possible, *every day* till the close of school.

3. In order that you may have a good school, will you, as parents, *sustain the teacher*? The best teacher cannot govern and instruct your children without *your sympathy and co-operation*. Let parents stay up the hand of their teacher, and it will not be half the work to govern the school. If you think the teacher in fault, it is better to speak to the teacher yourself than to find fault before your children. There is, at least, some truth in the common remark, that *children will not make much trouble in school if they do not expect their parents to take their part at home*.

4. Parents should visit the schools. When you employ laborers, you like to see how they do their work. Go into the school-room and see how the teacher does his work—how the scholars study, and recite, and behave. A visit from you will do the teacher good, and do your children good. If you owned a factory, and was assured that by visiting the mill occasionally the hands would make more cloth, and make it better, would you not be at the trouble to visit your mill? And when you are so often told that by visiting the school the teacher will teach better, and the scholars learn better, will you not take the trouble to visit the school? Or, is the improvement of your children regarded of less consequence than a few yards of cloth, or a few dollars in money?

Attention!

VISITOR. Pray, Mr. Teacher, do not let that boy go through his lesson without *attending* to what he is about.

TEACHER. Oh, he is so young that he cannot be expected to apply his mind much.

VISITOR. Did you never see a child play? Does not he apply his mind to his play? He can just as well attend to his lesson, if he will, (if you will, I might say,) as to his play; and to let him go through a lesson without attention, is vastly worse than nothing. He had better not read at all. Let me beg you

to be sure that every child *attends* to what he is about. It is the first requisite of success, not only in study, but in business, in work, in everything. Nothing better rewards the efforts of a teacher than attention on his part to the ways and means of awakening and securing the attention of his scholars. A school all alive is the school to improve; not a school kept still by rules and by fear; not a school amusing itself and tormenting the teacher; but a school kept alive and in order by wakeful attention under the teacher's animating guidance.

Explanatory Method.

[From Wood's account of the Edinburgh Sessional School.]

Thus, for example, if in any lesson the scholar read of one having "done an unprecedented act," it might be quite sufficient for understanding the meaning of that single passage, to tell him that "no other person had ever done the like;" but this would by no means fully accomplish the object we have in view. The child would thus receive no clear notion of the word *unprecedented*, and would therefore, in all probability, on the very next occasion of its recurrence, or of the recurrence of other words from the same root, be as much at a loss as before. But direct his attention to the threefold composition of this word, the *un*, the *pre*, and the *cede*. Ask him the meaning of the syllable *un* in the composition, and tell him to point out to you (or, if necessary, point out to him) any other words in which it has the signification of *not*, (such as *uncommon*, *uncivil*,) and, if there be leisure, any other syllables which have in composition similar effect, such as *in*, with all of its modifications of *ig*, *il*, *im*, *ir*, also *dis*, and *non*, with examples. Next investigate the meaning of the syllable *pre* in composition, and illustrate it with examples, (such as *previous*, *premature*.) Then examine in like manner the meaning of the syllable *cede*, and having shown that in composition it generally signifies *to go*, demand the signification of its various compounds *precede*, *proceed*, *succeed*, *accede*, *recede*, *exceed*, *intercede*. The pupil will in this manner acquire not only a much more distinct and lasting impression of the signification of the word in question, but a key also to a vast variety of other words in the language. This too he will do far more pleasingly and satisfactorily in the manner which is here recommended, than by being enjoined to commit them to memory from a vocabulary at home as a task. The latter practice, wherever it is introduced, is, we know, regarded by children as an irksome drudgery: the former, on the contrary, is an amusement. The former makes a strong and lasting impression upon the mind; under the latter the information wished to be communicated is too often learned merely as the task of the day, and obliterated by that of the next. It is very true that it would not be possible to go over every word of a lesson with the same minuteness, as that we have now intimated.—A certain portion of time should therefore be set apart for this examination; and, after those explanations have been given, which are necessary to the right understanding of the passage, such minuter investigations only may be gone into as time will admit. It is no more essential that every word should be gone

over in this way, than that every word should be syntactically parsed. A single sentence well done may prove of the greatest service to the scholar in his future studies.

REMARK. The prefixes and suffixes found in some Spelling Books may be used to excellent advantage in such exercises; and it would be still better for the teacher to have at hand some such work as McElligott's *Manual of Orthography and Definition*, from which to derive hints and select exercises as he may need them.—EDITORS.

Under Tutors and Governors.

The following anecdote is from an address lately delivered at the meeting of the York (Eng.) Bible Society, by Mr. T. J. Bourne:—

"Some time ago, Miss Hillyard, the governess in the royal family, seeing the Prince of Wales inattentive to his studies said,—'Your Royal Highness is not minding your business; will you be pleased to look at your book and learn your lesson?' His Royal Highness replied that he should not. 'Then,' said the governess, 'I shall put you in the corner.' His Royal Highness again said that he should not learn his lesson, neither would he go into the corner, for he was the Prince of Wales, and, as if to show his authority, he kicked his little foot through a pane of glass.

Surprised at this act of bold defiance, Miss Hillyard, rising from her seat, said,—'Sir, you must learn your lesson, and if you do not, though you are the Prince of Wales, I shall put you in the corner.' However, the threat was of no avail; the defiance was repeated, and that too in the same determined manner as before, his Royal Highness breaking another pane of glass. Miss Hillyard, seeing her authority thus set at naught, rang the bell, and requested that his Royal Highness Prince Albert might be sent for.—Shortly the Prince arrived, and having learnt the reason why his presence was required, addressing the Prince of Wales, and pointing to a foot-stool or ottoman, said,—'You will sit there, Sir!' His Royal Highness then went to his own room, returning with a Bible in his hand, he said to his Royal Highness the Prince of Wales,—'Now I want you to listen to what St. Paul says about people who are under tutors and governors,' and having read the passage [Gal. iv. 1, 2.] to him, he added,—'It is undoubtedly true that you are the Prince of Wales, and if you conduct yourself with propriety, you may, some day, be a great man—you may be a king, in the room of your mother; but now you are only a little boy;—though you are Prince of Wales, you are only a child, under tutors and governors, who must be obeyed, and have those placed under them to do as they are bid. Moreover,' said his Royal Highness, 'I must tell you what Solomon says;' and he read to him the declaration, that he who loveth his son chasteneth him betimes, and then in order to show his love for his child, he chastised him, and put him in a corner, saying,—'Now, Sir, you will stand there until you have learnt your lesson, and until Miss Hillyard gives you leave to come out, and remember that you are under tutors and governors, and that they must be obeyed!'"

We furnish the following interesting story for the benefit of our young friends. Teachers may use such subjects for exercises in composition, to good advantage, as they suggest thoughts to the pupils.

Frank and Harry; OR, THE DRAWING ROOM.

BY E. L. FOLLEN.

Frank and Harry were so well pleased with their mother's story of "Penitence and Peace," that after tea the next evening they begged her to tell them another just like it. The fire was burning brightly, the hearth was nicely swept, the shutters were closed, the pitted Maltese cat was stretched out at her full length on the hearth-rug, and the two boys were seated one on each side of their mother, and she had her knitting-work. How happy and comfortable they all were! The clouds which had rested on their faces the evening before had passed away, and sweet peace had returned.

"Dear mother," said Harry, "do tell us another story; that was first rate which you told us last night."

"I have no story in my head," replied his mother, "but I will, if you have a mind, ask you a few questions."

The boys looked a little disappointed. "Not about our lessons, I hope, mother; we have enough of them at school; I'm tired of them," said Frank.

"No," said their mother, "nothing to do with school lessons."

"Well, then, we are ready," said the boys.

"Suppose," she said, "one of the laborers from every place where the articles of which the furniture and ornaments in this drawing-room were produced, were to come in, who should we have to visit us this cold evening? Think, before you answer."

The boys put on their considering-caps, and at last Harry said, "First we should see a solemn Turk enter, with his turban and loose trousers, for the carpet came from his country. Then we should see a Chinaman, for the China vases were made in his country."

"And my nice straw chair came from China," said Frank.

"Then," continued Harry, "an African prince may enter, for the ivory and ebony on the piano were brought from Africa. Then a Frenchman would come bowing in and take his seat, for the paper is French. After him comes a grave Spaniard, for your guitar is Spanish."

"Is not the fender made of Russia iron?" asked Frank.

"Yes," said his mother.

"Then I introduce a Russian. And the table-cloth and curtains are English, so walk in, Mr. John Bull."

"The picture of a girl shading a candle was painted in Holland," said their mother, "so you must invite a Dutchman; and the copy of the Sybil was done in Rome, and we must have an Italian."

"This wooden vase was carved in Switzerland,"

said Harry, and so we have a Swiss; and the musical box came from Geneva, and there is a Genevan."

"Did not this palm-leaf fan come from Calcutta, mother?" asked Frank.

"Yes," she replied.

"Then we must have a Hindoo, and a Maltese, for Puss came from Malta."

"Puss is not a piece of furniture, Frank," said Harry.

"But she's just as good and better," said Frank, "and I'm sure she is an ornament."

"But, mother," continued Harry, "we must have an Irishman and a Scotchman, and what have we got that come from them? Oh, here is the lamp and stand, that came from Edinburgh, and the beautiful sea-weeds from Cork; to be sure ladies made them, but no matter, they'll do just as well; so sit down, ladies. Now have we not all, mother?"

"You have," she replied, "forgotten your own countrymen; but I think we must have an American to represent the labor of this country. These chairs, tables, piano, are works of his hands, and he is proud of his skill and industry; he looks and walks like a man."

"Now let us name over our company," said Harry. Thus he did, counting them as he did so on his fingers. "Fifteen," he said, as he finished.

"Maltese, sixteen," cried Frank, "for puss shall not be passed over."

"Now," said their mother, "suppose you seat them all around the room."

"The Turk shall have the arm-chair," said Harry.

"No," said Frank, "the Chinaman shall sit there, and his long cue shall dangle over the back."

"If, now," said their mother, "we were to invite all the animals that have in any way contributed to the furnishing out our drawing-room, to visit us in imagination also, what should we have? Think well."

"A flock of sheep," said Frank, "for the wool that the carpet is made of."

"And horses, for their hair, for the chairs and sofa," cried Harry.

"As we have not much room for so many four-legged visitors, besides our bipeds, we will take only one animal as the representative of the rest of his brethren. So say a sheep and a horse."

"Especially," said Frank, "as we must have an elephant, for without his tusks we should not have ivory for our piano keys. So Mr. Elephant, take a seat."

"Now what next?" said their mother.

"Of whose skin is the bottom of this chair made?" asked Harry.

"I am not sure," replied his mother; "perhaps that of a goat."

"Let's have a goat, then, with a long beard, and stand him by the Turk and Russian."

The boys were now silent, for a few moments. "I don't think of any more," said Harry, at last.

"There are more animals, however, which have helped to furnish this room," replied their mother.

"The turkeycock," cried Frank; "the feather-brush is made of his feathers."

"I have thought of another," said Harry, "the silk-worm. The fringe on the curtains is silk, and the velvet on the great arm-chair is made of silk; so creep into the parlor, Mrs. Silk-worm, and take your place under the elephant, just where they put the mouse in the museum."

Again they stopped to consider, for their mother told them that they had not yet got all the animals into the room which had a right to a place there. "There is," she said, "an animal bigger than any you have yet thought of, and which would find poor accommodations here, I fear."

The children tried in vain to think what animal this could be.

"I think," said their mother, "that the elasticity of this chair is produced by whalebone."

At this the boys shouted—"And at any rate he can claim the oil in the lamps."

"What shall we do with a whale, mother! We must invite a very young whale to come; the smallest they have will represent whaledom, and then we shall be very much crowded."

"What other animals can you think of? We have not all," said their mother.

"I have thought of another," said Harry, "a hog, a hog—the hearth-brush is made of bristles. Now, Mr. Grunter, I hope you'll behave your best."

"I have thought of another," cried Frank: are not the strings of your guitar of catgut? and then puss is always here to take her place."

"First," said Harry, "you make her a piece of furniture, and then an animal."

"She don't care," replied Frank, stroking her.

"There is yet another animal," said their mother, "that you have not yet thought of, and a very important one, too."

The boys thought a while, but could not guess.

"What fastens the joints of the tables and chairs, and holds on the veneering?" asked she.

"Glue, glue," replied Harry; "and now I have it; glue is made from the hoofs of cows and oxen; so Mrs. Mooley-cow may come in, for she is not so big as an ox, and will do as well. And now I am sure we have all."

"No," said Frank, "I have just thought of another. Mother told me yesterday that this basket was made of porcupine quills, so we'll have a porcupine, and I guess he'll eat up his quills when he sees what a company he has got into."

After puzzling their brains a while longer, they all concluded they could not think of any other animal who had contributed in any way to furnishing the parlor.

"Let us now name over the whole company," said Harry; so he began: "First, the human beings. A Chinese, a Hindoo, an African, a Turk, an Italian, a German, an Englishman, a Russian, a Dutchman, a Spaniard, a Frenchman, a Swiss, an Irishman, a Scotchman (these two last are ladies," he said, in a sort of parenthesis), "and a free American."

"And a Maltese," cried Frank, "for I insist upon it, Puss is one of the ornaments of the room,—seventeen in all. Now I will name the animals. An ele-

phant and silkworm, a porcupine and a cow, a horse and a hog, a turkeycock and a sheep, a goat, a whale and a cat—eleven in all."

"Just imagine," said Harry, "if all these animals and men were really here, what a room full we should have. It seems to me as if I could see them now, particularly the Chinese and Turk among the men, and the elephant and whale among the animals."

"I doubt not," said their mother, "that we might increase the number, if we knew the exact history of the manufacture of every thing here, very like some of the colors have been derived from insects."

"Colors from insects?" said Frank.

"Yes, the Cochineal is an insect used to dye scarlet; but we will stop here, as we are not sure. Now tell me how have we obtained all these articles made by the people of other nations? How did we get this carpet from Turkey? this paper from France? this vase from China? these curtains and table-cloth from England, and so on with all?"

"Why," said Frank, "you bought them in the shops."

"But how did they get into the shops?"

"Men buy them and bring them here in vessels from the country where they are made," replied Harry.

"And what are these men called?" asked their mother.

"Merchants," replied Harry.

"When they go to England, and China, and all these places for these things, do they carry nothing but money to get them with?"

"No, mother, they carry goods from this country, for I have seen them loading vessels that were going away, and I suppose they take the money they get for the goods they carry, and buy the articles that are wanted here."

"And what do we call this business?" asked his mother.

"Commerce," replied Harry.

"And what are these men called who make all these articles of furniture?"

"Mechanics."

"And what do we call those who paint pictures?"

"Artists."

"Did it ever strike your mind before how many people, and how many different materials were requisite to make a drawingroom as pretty and as comfortable as this is?—how much science and skill, how many different countries contributed to our pleasure? and in short, how all quarters of the globe are, as it were, brought round our fireside by the power and ingenuity of man?"

"It never did," said Frank.

"It seems to you as if we had brought together by our imaginations, a very large and strange assembly of human beings and animals, who have contributed towards producing what we see here, and are now enjoying. Yet we have only conjured up a small portion of those who were actually engaged. How many sheep, think you, it took to furnish wool for this carpet? How many hands to make it? How

many silk-worms supplied the material for the velvet of this chair? and how many industrious and ingenious human beings to manufacture it? and so on with almost everything here. A room much larger than this would not contain the number we might summon to our meeting. Miners, glassblowers, and many others would have a right here. But now we will dismiss our curious assembly, for it is time for you to say good night to them and to me."

"Begone, all of you," said Frank, "all except Puss, and she shall remain undisturbed stretched out on the hearthrug, sound asleep."

Hints on Teaching.

Teachers often experience a difficulty in keeping the attention of all the pupils fixed to the subject of the lesson before them; the youth often immediately after reading his sentence having his mind, or tongue, and often even hands engaged, till it goes round all the pupils in the class consecutively, and comes to his turn again; this mechanical method is obviated by causing the children, (say they composed a class containing 12 in number) after 1st, 2d or 3d had read, to make 9th or 10th read, or any other number who was, apparently, inattentive to the lesson; and where the class stand while reading, causing the attentive to take the place in the class of the inattentive, has a good effect in inciting to diligence.

Another mode of counteracting the above waywardness is for the teacher to read a considerable portion of the lesson himself, and if he perceive a tendency in the minds of any to wander, then to stop and require such mentally truant one, to begin where he left off; of course he asks where, then put to the next, and whoever in succession can continue from where the teacher stops, ascends in the class above the listless, and if the place to read be still unfound, then another.

Much labor is often undergone before the youth's mind can be induced to recollect dates, occurrences, local or historical, &c. To undo this natural disposition, I have found the system practised in Marlboro' Street Establishment, Dublin, effectual. Suppose a class of 16 or 20 standing before the teacher, he announces to them that they are at liberty to catechize or question one another on any subject of their reading lessons, as history, geography, scripture, &c. Then he bids No. 2 to ask the head pupil of the class a question from any of the above lesson-books that he may recollect. Perhaps for one or two such lessons, he has none, then 3 none either, 4 none, 5 perhaps can recollect something about Washington, the Indians, &c., or perhaps some of the miracles of Christ from the Testament; he puts his question to some of those above him in the class, say 2, who perhaps answers it; in which case all keep their places, and 6 has then a liberty to ask a question at one above him; but if 2, or whoever else was questioned by 5, cannot answer, then 2 is at liberty to ask 5 a question, which if 2 cannot ask, 5 takes his place in the class, and he 5's; but suppose 2 can ask some sensible question and 5 can answer it, then they change places; but if 5 cannot answer the question, all stand as they were; and 6 or 7 or 8, or whoever can ask a useful, instructive question, next proposes one to any of the pupils

above him, who acts as we have represented the 5th and 2d as having done. For one or two lessons this may seem strange, and few questions be elicited; but if persisted in by the teacher, it has been invariably found to become interesting to the young, and they soon take to writing out incidents where they can find them, that they may have a store on their mind when called for.—*Wright's paper.*

School Falsehoods.

The scholar who plays truant is guilty of falsehood. He intends to deceive both his teacher and his parents in the very act of truantship. But this is not all. To avoid reproof, he gives false pretences, equivocates, and often, in the end, is guilty of the downright lie. And more than this, the habitual truant keeps his mind in a state ready to lie the whole time, and thus injures his sense of truth, and prepares himself for the commission of other crimes. If a written excuse is presented at a time different from that which the parent intended, it is an *acted* lie.—Another way of lying is, when a scholar procures some person to work out a problem, or to write a composition for him, and then presents it as the product of his own labor. The *prompting* of a fellow-pupil during recitation, comes under the same head.

Scholars perhaps think they speak the truth, when they say, "I know the answer but cannot say it." For no one can be said to truly have an idea, until he can express it.—*Manual of Morals.*

Reading Aloud.

A book is ten-fold a book, when read in the company of beloved friends, by the ruddy fire, on the wintry evening; and no commentaries, or notes *Variorum*, are comparable to the interrupted sayings of the wife and sister, or the merry ejaculations of the listening child. A good voice, a just intonation, and a quiet but animated delivery, secure far more of the soul of the great author, than any amount of closet study. It is delightful to feel that the delight is shared by so many. There is frugality of time in reading good books aloud. The matron goes on with her stocking; the girls ply the nimble needle; Jack and Tom work away at carving and joinery; the very child that rolls on the carpet or plays with puss is unimpeded in his pursuits; all the while the stream of knowledge and entertainment is gently flowing into the wakeful ear. Glances from bright eyes, smiles, and laughter, or perhaps the sigh and tear, bear witness to the stroke of wit, or the touch of pathos. To make a pleasure, otherwise solitary, one of social love, is to exalt it; this takes place when some stirring old history is read aloud in the family group. Ancient stories were made to be orally delivered; among the Greeks, we know, they were pronounced before thousands; among the Romans, in crowded saloons of the great; it is little enough if we do the like by our firesides.

Poetry, which by its numbers addresses itself directly to the ear, is robbed of half its charm if perused in silence. The taste for rhythmical composition is awakened and cultivated by social reading. The

legend goes home to the imagination with accumulated force when uttered by a beloved voice. There is magic in the human organ, which the dead letter of the page can never rival, and which leaves deep traces on the memory. Though the great poet writes it for solitary lucubration, I would claim it also for the domestic circle, to rise on the wings of genius, when tragedy

"In sceptred pall comes sweeping by,
Presenting Thebes, or Pelops, line,
Or the tale of Troy divine,
Or what (though rare) of later age
Ennobled hath the buskined stage."

Who does not remember some illumined evening, in which faces, now removed, shone more brightly at the recital of some great action, and where the thrill of exquisite awe ran through the entire assemblage of hearts in unison! For such enjoyments, we might be willing to sacrifice a few hours of reclusive literature, which, but for these interruptions, might grow moody, selfish and unfruitful. Let us bathe our intellectual pleasures in domestic affection. So rich are the stores of written learning, that we may, on these sacred occasions, deal chiefly with masterpieces; the choice morsels of human wisdom. Selection is more apt to be guarded, and equivocal matter is more sure to be banished, where the wife and daughter are to be listeners.—*Newark Daily Adv.*

SCHOLARS. No one can be made a scholar; almost all persons can make themselves scholars. The person who in youth learns to exercise his own powers of mind is sure to turn out a scholar, and a useful practical man, if he lives to the middle period of life. If he does not learn to think for himself, as well as to read books and receive facts from others, he will never become really learned. Who ever heard of a scholar made by lectures, or by teachers in any form! Has not every scholar who has yet appeared in the world, become such by his own efforts—by personal application—by the patient and persevering use of the machinery within him? Who ever heard of a hereditary learning, or of ideas manufactured like cotton cloth—by steam or water power?

WILTED—WITHERED. Dr. Daniel Drake, the "old man eloquent" of the Medical profession in this country, suggested, many years ago, the adoption of the word *wilted* into our language, differing from *withered*, in that the subject can be revived.

The habits of children prove that occupation is of necessity with most of them. They love to be busy, even about nothing, still more to be usefully employed. With some children, it is a strongly developed physical necessity, and if not turned to good account, will be productive of positive evil, thus verifying the old adage, that 'idleness is the mother of mischief.' Children should be encouraged, or if independently disinclined, compelled to perform for themselves every little office relative to their toilet, which they are capable of performing. They should also keep their own clothes and other possessions in neat order, and fetch for themselves whatever they want; in short, they should

learn to be as independent of the services of others as possible, fitting them alike to make good use of prosperity, and to meet with fortitude any reverse of fortune that may befall them.

PLATO. Several anecdotes of Plato are preserved, which reflect honor on his moral principles and character. Having raised his hand to correct a servant when in anger, he kept his arm fixed in that posture for a considerable time. To a friend coming in, and inquiring the reason of his singular conduct, he replied, "I am punishing a passionate man!" At another time, he said to one of his slaves, "I would chastise you if I were not angry." When told that his enemies were circulating reports to his disadvantage, he remarked, "I will so live that no one will believe them." A friend, observing his studious habits, even in extreme old age, inquired how long he intended to be a scholar. "As long," said he, "as I have need to grow wiser and better."

It can be shown that more than one half the sickness in our country is the result of ignorance, of a want of that acquaintance with the laws of health which might easily be obtained, and that, consequently, more than one half the expense occasioned by illness, and the loss of time, labor, &c., attendant upon it, might be saved if the whole community were properly educated.

If the schools are not good enough for the wealthy, they must be made good enough. And when they are good enough for the wealthy, they will be good enough for all. And if the schools are not virtuous enough for the virtuous, they must be made so; and then they will answer for all classes.

If proper inquiry be made, a large proportion of the paupers sustained at public expense, will be found to belong to the ignorant class, and to have been brought to their present condition by their want of the intelligence necessary to enable any one to manage business for himself.

DO IT. If you have an ugly job to do, do not sit down beside it and grumble, and wish it was done, but do it. Do it bravely, and with regard to the work itself. Make yourself interested in its execution, and our word for it, work will be but play. It is as easy to do as it is to decide on doing; vastly easier than to sit and groan over it. It is well to consider a thing carefully, but not to take all time for plans and none for execution, and vice versa.

A HASTY TEMPER. Fight hard against a hasty temper. Anger will come, but resist it stoutly. A spark will set a house on fire. A fit of passion may give you cause to mourn all the days of your life.—Never revenge an injury.

We never knew a scolding person that was able to govern a family. What makes people scold? Because they cannot govern themselves. How, then, can they govern others? Those who are generally calm, are prompt and resolute, but steady and mild.

The following twenty lines deserve a place in the memory of every young man and woman. In the susceptible season of youth let such noble sentiments be treasured up by the sons and daughters of Vermont, and they would not fail to produce the fruits of a pure and elevated patriotism.

What Constitutes a State?

BY SIR WILLIAM JONES.

What constitutes a State?

Not high-raised battlement and labored mound,
Thick wall or moated gate;
Not cities proud, with spires and turrets crown'd:
Not bays and proud-arm'd ports,
Where, laughing at the storm, rich navies ride:
Not starr'd and spangled courts,
Where low-bred baseness wafts perfume to pride:
No—men, high-minded men,
With powers as far above dull brutes endued
In forest, brake, or den,
As beasts excel cold rocks and brambles rude:
Men, who their duties know,
And know their rights; and, knowing, dare maintain;
Prevent the long-aimed blow,
And crush the tyrant, while they rend the chain—
These constitute a State:
And sovereign law, that State's collected will,
O'er thrones and globes elate,
Sits empress, crowning good, repressing ill.

Ventilation Essential to Health.

The bad state of the atmosphere of stove-heated rooms cannot be cured by any amount of steaming water. Ventilation is what is wanted, and what is always found wanting, and what renders the atmosphere of our churches and other public rooms so often unfit for human respiration.

Rooms should not be "*frequently ventilated*," but *always* so. Every tight room should have a ventilator constructed in the ceiling, to answer the place of the good old-fashioned fire place, of keeping up a constant circulation of air.

Some one in your pages, I think, has said that "stoves were great savers of fuel, at the expense of human lives"—all of which is for the want of ventilation. It is a most serious fault in the construction of nine-tenths of all the school houses that are heated by stoves, that there is no *ventilation*. I have no doubt but thousands of children in the United States are annually sent to a premature grave by diseases contracted, aye, created, in school rooms. If our wise men, who sometimes make very foolish laws, would enact that every school room should be so constructed as to remedy this evil, they would for once show the world that they possessed some feelings of humanity at least. Daniel P. Thompson, of Montpelier, Vt., author of "*Locke Amsden*," is worthy to be remembered by every child in America, for the beautiful manner in which he has illustrated the subject of ventilating school houses.

SOLON ROBINSON.

Crown Point, Ia., Sept., 1848.—*Am. Agricult.*

A life of duty is the only cheerful life—for all joy springs from the affections; and it is the great law of nature, that without good deeds, all good affection

dies, and the heart becomes utterly desolate. The external world then loses all its beauty; poetry fades away from the earth; for what is poetry, but the reflection of all pure and sweet, all high and holy thoughts?

"The longer I live, the more I feel the importance of adhering to the rules I have laid down for myself in relation to such matters:

1. To hear as little as possible whatever is to the prejudice of others.
2. To believe nothing of the kind till I am absolutely forced to it.
3. Never to drink into the spirit of one who circulates an ill report.
4. Always to moderate, as far as I can, the unkindness which is expressed towards others.
5. Always to believe, that if the other side were heard, a very different account would be given of the matter."—*Simson*.

Never do any thing that can denote an angry mind; for although every body is born with a certain degree of passion, and, from untoward circumstances, will sometimes feel its operation, and be what they call "out of humor," yet a sensible man or woman will never allow it to be discovered. Check and restrain it; never make any determination until you find it has entirely subsided; and always avoid saying any thing that you may wish unsaid.—*Lord Collingwood*.

I promised God that I would look upon every Prussian peasant child as a being who could complain of me before God, if I did not provide for him the best education, as a man and a Christian, which it was possible for me to provide.—*School-Counsellor Dinter*.

He who *can think and loves to think*, will become, if he has a few good books, a wise man. He who knows not how to think, or hates the toil of doing it, will remain imbecile, though his mind be crowded with the contents of a library.

SLEEP. Richerand observes: "The exciting causes to which our organs are subject during the day, tend progressively to increase their action. The throbbings of the heart, for instance, are more frequent at night than in the morning; and this action gradually accelerated, would soon be carried to such a degree of activity as to be inconsistent with life, if its velocity were not moderated at intervals by the recurrence of sleep."

INTERESTING FACT. Dr. Holmes, editor of the *Maine Farmer*, states that by washing pencil marks over with a solution of gun cotton in ether, they can be fixed so firmly that India rubber cannot erase them.

FRET NOT. Dr. Alcott said, while at Westfield, that the most efficient cause of death in this country, is *fretting*. This habit seems almost inseparable from the impatient enterprise of the American character.

THE AGRICULTURIST.

Winter Care of Sheep.

In our first volume, (p. 100) we published some valuable facts in regard to the importance of shelter for sheep in winter. Some English gentlemen who had made careful experiments were led to believe that, for fattening sheep, it would be economical to have the fold not only close, but warmed,—always taking care to secure fresh air and cleanliness. In this country, such an extreme of care would not pay; but the experience of Judge Pettibone of Manchester appears to prove conclusively the economy of close sheds for store sheep. He confined his flock in close sheds for five months, fed with nothing but intervalle hay, including some wild grass; and there was not a sickly sheep in the whole lot. They all came out in as good order as when put up. He is confident that the wool is thus kept softer and of better growth, and that there is a saving of both manure and fodder.

Morrell's *American Shepherd* (an excellent book, which every flock-master would do well to study) has abundant evidence to the same purpose. The more general practice is, to let the sheep run in the open air, with more or less of shelter to which they can retire. Often the shelter is exceedingly inadequate, amounting to little more than protection from severe north winds, &c. The consequence is, that there are immense losses; multitudes of sheep die; ewes are unprepared for spring; lambs are lost, and many that survive are puny; the fleece is light and uneven; the whole flock, instead of improving, deteriorates, and instead of being made profitable, wool-growing is pursued at a loss.

The *Mountain Shepherd's Manual* (a Scotch publication) says: "Shelter is the first thing to be attended to in the management of sheep. While every good shepherd is decidedly hostile to their being confined, or to their being forced into shelter whether they wish it or not, it cannot be too strongly recommended to all sheep farmers to put the means of avoiding all the severity of stormy weather within the reach of their flocks at all times." In all the cold countries of Europe this point is carefully attended to. Recent experiments appear to prove the Scottish work wrong in respect to leaving sheep at liberty to expose themselves. Mr. Morrell states his own experience as follows:—

"Until within the last ten years, the writer's flocks, like thousands of others at the present time in this and other States, were denied the benefits of shelters; and the loss, in proportion to the severity of winters, varied from five to ten per cent. The diseases caused by their exposure were scab, pelt-rot, dysentery, and colds, which caused an excessive discharge of mucus from the nostrils, while many died from no other cause, apparently, than sheer poverty of condition.—Since, however, his sheep have been protected, the deaths have not exceeded one and a half per cent. in regard to number, and if comparative value were the standard, it would not be considered of any moment, as the loss has been mostly among diminutive spring

lambs—so from bad nursing, and old ewes which, from superiority of fleece or carcase, were retained thus long, to breed from. If this is contrasted with the per centage of loss before the resort to protection, it will readily dispel the *delusion* that shelters enervate the constitution of sheep, or are in any wise an inducing cause of disease; for, since protected, no epidemic has prevailed among them, and disease of any kind is rare indeed, and only occurring in individual cases."

Mr. Morrell adds that his attention to shelter has also improved the weight of fleece. Before sheltering, the average weight (Saxon Merino) was 2 lbs. 5 oz. to 2 lbs. 9 oz. Since sheltering, notwithstanding a material advance in fineness, the average has been 2 lbs. 12 oz. to 3 lbs. 2 oz. There is, besides, increased softness of fleece, and evenness and soundness of fibre. He also finds an increase in the number of healthy and vigorous lambs, a saving of fodder, and increased value of manure.

We trust that wool-growers in Vermont will take care to satisfy themselves in regard to this important matter. The same principles are applicable to the care of all domestic animals. To fatten them, comfort and quiet are necessary. To prevent their losing fat, to keep them from growing thin and thus more susceptible of injury from cold, is it not evident that there should be the same attention to comfort and quiet? Every one knows that a lean animal suffers more from cold than a well-conditioned one. Every experiment proves that exposure to cold increases the demand for food—renders more food necessary to keep up the same condition.

In regard to food, beans and peas are found to produce more wool than almost any thing else, and are doubtless the best extra dry food that a Vermont wool-grower has at command. But for the health and vigor of the animal, plenty of water, and a mixture of green food should be provided. On this point we add two or three paragraphs from Mr. Morrell:—

"The feeding of green food, such as potatoes, apples, hemlock or pine bows, &c., is strangely disregarded by a large majority of American sheep-growers. This is a prominent point of attention in German management; indeed, it is thus in every section of the Continent where fine-wooled sheep are cultivated. The sheep, if placed in localities suitable to its general habits, at no period of the year is it so perfectly healthy and thrifty as during the season of pasturage; and from this the inference should be deduced, that succulent food is the prominent inducing cause. Confinement wholly to dry food does not comport with that variety of condiment, which has so frequently been urged; and consequently, if a provision is not made of something else, it will be followed by disorganized action of the digestive functions, producing costiveness and constipation. The disease so frequent and fatal in American flocks, called the "stretches," results from costiveness; but this is scarcely known in England, which arises from the large quantities of succulent food the sheep are supplied with during the winter months. In addition to this, further proof may be found in the fact that it is

never known to attack the animal during the grass season. The writer speaks from personal observation, in stating that a supply of green food is indispensably necessary as a preventive of disease.

In addition to green food operating thus, it has a tendency to increase the wool and yolk secretions, and thereby those valuable properties of wool, such as elasticity, softness, and soundness, are increased and perfected; and withal, being conducive to health, the condition is improved, and consequently an augmented quantity of wool is a certain result.

That water during the foddering season is of paramount importance to the health and general well-doing of sheep, is no longer a mooted point. It is true that the animal will quench its thirst, as far as it is possible, by eating snow; but if tested by experiment, it will readily be seen which it prefers. Some object to provide water, for the reason, that when the weather is very cold, it drinks too much, and thereby is robbed of much animal heat. This is somewhat true, but if warm shelters are provided, as they should be, it is counteracted. If the experiment is made with a given number, a portion being permitted access daily to water, and the others only the poor privilege of eating frozen snow to be dissolved in the stomach, it will be discovered that the first are more healthy, and will yield a greater crop of wool, which will be distinguished for those properties named under the preceding head. It cannot be expected that the wool fluids will be abundant if the sheep is denied water, unless roots form a good proportion daily of its consumption. In this case they will rarely drink, provided they are not salted too profusely. If the reader will refer to the chapter on the "Structure of Sheep," he will discover that a large supply of saliva is needed in the process of rumination, which must be afforded, mostly, either by green food or water. In conclusion, humanity demands our practical attention to this subject."

Convention of Fruit Growers.

In our last we published some account of the Pomological Convention at Buffalo. A Convention has since been held at New York, composed of delegates from Horticultural Societies.

The following is the SELECT LIST OF FRUITS FOR GENERAL CULTIVATION, as adopted, after critical examination, by the whole convention, viz:

APPLES—Early Harvest, Large Yellow Bough, American Summer Pearmain, Summer Rose, Early Strawberry, Gravenstein, Fall Pippin, Rhode Island Greening, Baldwin, Roxbury Russett. And, for particular localities,—Yellow Bellefleur, Esopus Spitzenburgh, Newtown Pippin.

PEARS—Madelaine, Dearborn's Seedling, Bloodgood, Tyson, Golden Beurre of Bilboa, Bartlett, Seckel, Flemish Beauty, Beurre Bosc, Winter Nelis, Beurre d'Arenberg. And, for particular localities,—White Doyenne, Gray Doyenne.

PLUMS—Jefferson, Green Gage, Washington, Purple Favorite, Purple Gage, Bleeker's Gage, Coc's Golden Drop, Frost Gage. And, for particular localities,—Imperial Gage.

CHERRIES—May Duke, Black Tartarian, Black Eagle, Bigarreau or Grafton, Knight's Early Black, Downer's Late, Elton, Downton.

A General Fruit Committee was appointed, consisting of State Fruit Committees in all the States represented, who are to keep up an active correspondence and pursue their investigations through the year.—The next meeting of this *American Congress of Fruit Growers* is to be held in New York on the first Tuesday in October next.

The Chairman of the General Fruit Committee is Mr. A. J. Downing, of Newburgh, N. Y. The members of the Vermont Committee are R. Mattison of N. Bennington, C. Goodrich of Burlington, M. Slocum of Manchester, and B. F. Fay of Bennington,—the Chairman being authorized to add another.

Agricultural Chemistry.

In such a work as ours we can hardly undertake with advantage any thing like a discussion of the principles of agricultural chemistry. If we can contrive to furnish such facts as to demonstrate its importance and excite young farmers to the pursuit of such knowledge, it will be a good service.

Heaps of broken brick and lime rubbish are frequently seen in some neglected spot, thrown into gutters, or by the road side. Chemists tell us that they are so many manure heaps. Some say they are better than so much gypsum (plaster of Paris) for grain and grass crops. The bricks contain roasted alumina and silicate of potash. The roasted alumina forms one of the best of soils. Some 40 years ago, there was a piece of land, four acres, near Boston, covered with brick kilns. Ever since it has yielded large crops of grass without manure, and continues to yield two and a half tons to the acre at one mowing to this day. Silicate of potash forms an essential part of all grass, straw and grain. Old bricks, therefore, made as fine as ground plaster, or even in a much coarser form, may be depended upon as furnishing important materials for a crop of grass, grain, corn, &c. Let the reader try a few handfuls as a top dressing for grass.

As to the old mortar, it is said that a Chinese will scrape the plaster from a room and replaster it at his own expense, for the sake of applying the old plaster to his land.

Prof. Johnston tells us at page 229, vol. 2d, of his "Agricultural Chemistry," that a portion of the soil of an arable district in Sweden, which from time immemorial had grown excellent wheat without manure, was found by Berzelius to contain minute fragments of bone, capable, upon boiling with water, of yielding a weak solution of gelatine (glue). It was concluded, therefore, that the spot had been an ancient battle-field, and its prolonged fertility was due to the bones of "old time" buried in it, and still to some extent undecomposed.

As there is no tradition of any such battle, it must have occurred many hundred and perhaps thousand years ago. Or it may be that the bones of animals were by some means brought together there in large

quantities, at an equally remote period. This circumstance shows the value of bone dust as a manure, and the permanency of its effects.

English agriculturists have long practiced the importation of bones from the continent, and ship loads have been sent from this country, to be used for manure. According to Liebig, a single pound of bone contains phosphoric acid enough for 100 lbs of wheat. But it is found that even bone dust is far from yielding its full strength to the crop at once. About half the weight of bones consists of phosphate of lime, a substance difficult of solution. In dry soils and seasons the effect of bone dust is comparatively slight. But if sulphuric acid be added, a decomposition takes place; the bones are *cooked*, so that the plant can feed upon and digest them. It is said that "four bushels of bones, dissolved in half their weight of oil of vitriol, have been found more effectual than sixteen or twenty bushels of crushed bones in their raw or natural state."

In a word, the culture of a crop is a process of feeding and care analogous to the making of pork. To fatten a hog well and economically, it is necessary to know what food is best, and in what form; and to protect the animal from whatever would interfere with his comfort. You would not expect him to thrive on the food of a cow or a horse. So it is with plants. They must have appropriate food;—all unpleasant neighbors must be kept away; and the plant must be free to healthful influences above ground and below. Perfect culture therefore would require a complete knowledge, on the part of the cultivator, of the wants of each plant, what it is composed of, what food it needs and in what form; of the constituent parts of his soils, so that he can tell not only what crop may best be put here and what there, but what he must add in order to supply, through a given soil to a given crop, the necessary food; and finally, how that added material is best to be obtained and applied. In all these inquiries, if he would go beyond mere experience and the authority of others, so as to understand scientifically what he is about, agricultural chemistry must be his guide. It is not to be expected that farmers will acquire such complete knowledge. Indeed the most eminent among those who are devoting their lives to such studies, have not yet attained it. But every step in the acquisition has its practical advantages; and young men who intend to succeed as farmers, cannot too soon begin this fundamental study.

BUTTER MAKING. A lady writes to the Ohio Cultivator as follows,—showing that a very small scrap in such a paper may be worth dollars to the attentive reader:—

The hint received in these papers, to put a quart of boiling water in a bucket of milk before setting it for cream, raised my butter to high demand in our market, over that of my old housekeepers, either ignorant of, or inattentive to this process.

THE CHEESE TRADE. We learn that Messrs Mills, Converse & Co. of this county, have, during the pres-

ent week, shipped *five entire cargoes* of cheese, amounting to over 500 tons, from Ashtabula harbor. They have purchased in Ashtabula, Lake and Geauga counties during the last two months over 1000 tons of cheese for shipment to New York.—*Ashtabula Sent.*

Root Pruning.

The system of root pruning was first adopted by Mr. Rivers, a celebrated horticulturist and fruit grower of England. He says he was led to a discovery of this system by a desire to test his specimen trees. His first object was to confine them to a small space and promote early fruitfulness. After trying different places, such as planting them in brick pits, plunging in large pots, &c., he tried frequent transplanting, as he had observed that some apple trees in his nursery, that had been removed, become stunted but prolific—that made an abundance of fruit buds and bore profusely. He found that these trees had no large feeding roots, but only a mass of fibres. It occurred to him then that he could keep the roots of his pear trees in a similar state by pruning their roots, which he does by digging a trench, say 6 or 8 feet from the trunk of a young tree, and cut off all the roots at that distance. This fulfilled his desires, and he states that he has practised this mode for five successive years, with the most satisfactory results. He generally does this, we believe, in November. It has been tried in other places, principally on the pear, with similar results. It will of course dwarf the trees, and whether it will allow them to live as long as common, we do not know.—*Maine Farmer.*

Duration and Fertilizing Effects of Animal Manure.

All portions of animal manures are good, but different in the rapidity of their fertilizing effects as well as their duration. The principal of this difference is described by Professor Johnson as follows:—

"Horn, hair and wool depends for their efficacy, precisely on the same principles as the blood and flesh of animals. They differ chiefly in this, that they are dry, while the blood and flesh contain 80 or 90 per cent. of their weight in water. Hence, a ton of horn shavings, of hair, or of dry woollen rags, enrich the soil as much as ten tons of blood.

In China, the hair, which, in every ten days is shaven from the heads of the entire population is collected and sold for manure throughout the empire.—The effect of soft animal matter is more immediate and apparent, while that of hard and dry substances is less visible, but continues for a much longer period of time. Woollen rags, when made into a compost, and fermented, form an excellent manure for hops, turnips, and most other kinds of crops."

WOODEN GUNPOWDER. From sundry recent experiments, the fact is established that fine sawdust or rasped wood, steeped in a mixture of concentrated sulphuric and nitric acids, and afterwards washed and dried, will explode similar to common gunpowder, and if rightly managed with much greater force.—The greatest wonder is that the fact had not been discovered earlier.

Agricultural Premiums.

After all that is said of a fine show, what the farmer wants is the *Dollars*. Fine animals, large beets and squashes, a great variety of apples, an uncommon crop of corn, may be produced at too great cost. What the farmer wants, and what the Agricultural Societies should aim at, is, the best balance of income over expense in any given case. The best cultivated farm is that which puts the most money into the pocket on the long run. The best crop is that which (the condition of the land after harvest being equally good) gives the greatest return *after paying expenses*.

Now it is evident that premiums for the largest crops, the finest vegetables, the best animals, &c., do not exactly meet the case. Although, as a general rule, the best is the most profitable, yet the best *may* cost too much, and the "second best" may be, with reference to the balance, the better crop. A. may get 80 bushels of corn from an acre of land, while B.'s crop averages but 70; and yet B. may be making the most money—may be cultivating in the most judicious manner with reference to the balance and to his crops for a series of years. C. may happen to have a monster of an ox; but it may have come into his hands by chance, or it may have cost him more than it is worth; while D.'s well-formed and every way excellent animals of medium size may be far better examples for his neighbors, and far better deserve encouragement with a view to the profit. E. may have got together a vast variety of fruits of good repute in nursery catalogues; but after all, F.'s choice collection of a dozen, with his careful observations and his skillful culture may be worth ten times as much to his neighborhood, his county, and the State.

We must be excused for repeating this thought, for we are sure that attention to it is absolutely essential to the best success, if not to the life, of our Agricultural Societies. It would be folly to turn our backs on the experience of our brother farmers in other States, and to refuse the use of their methods because they have been long tried; rather that long and successful trial should commend them to our confidence. We are not yet either so far in advance of all the agricultural world, or endowed with such superiority of genius, that we can wisely refuse to listen to the opinions or look upon the experience of others with something of respect and deference. But while we should not rashly throw away what we hear, while we may with the best hopes abide by our organizations, modelled after those of our more experienced neighbors, there can be no unbecoming presumption in aiming at improvements. Especially may we do it when we find, as we do, that the more enlightened agriculturists abroad, in other States and in Europe, feel more and more deeply the need of constant attention to the ways and means of influence that Agricultural Societies may command.

It has been often enough proved, and long years ago, that 100 to 125 bushels of corn and more can be raised to the acre. Do we longer need premiums for the *largest* crop to the acre? Would not a premium for the *most profitable* crop be in all respects preferable?

It is not our object, however, to specify particulars. We only wish to urge the importance of using the funds which our Societies have at command, with a clear understanding of the objects to be effected and of what we need. It is pleasant to see fine specimens in any department of industry; and the exhibition of them should be encouraged. But fine specimens are not the *chief* object, and should not appear as such on the premium list. The chief object should be the *improvement of the farmer's balance sheet*, including the changing value of his acres; and upon this, in making out a premium list, should the mind be strenuously fixed.

Manures—Stall-Feeding, &c.

Mr. F. HOLBROOK of Brattleboro, gives, in the Cultivator, an account of the farms of Messrs. Barnard and John Lynde of Guilford. These gentlemen, it appears, were a few years ago distinguished for their profitable dairies; but have now turned their attention to making beef,—doubtless finding that still more profitable. With their intelligent and thorough management, upon a good Vermont soil, no agricultural pursuit adapted to the climate could long fail of satisfactory results. We copy the substance of the article:—

The farms of the Messrs. Lynde contain over two hundred acres, each, being a high swell of land, the surface moderately rolling, and the soil a strong, fertile loam, resting upon an impervious hard-pan, at the depth of about 18 inches. Their buildings are substantial and spacious, presenting an appearance of neatness and good order. Upon one farm, the barns are 65 by 30 and 30 by 40, and on the other, 70 by 45 and 30 by 40 feet, with horse-barn and sheds. Notwithstanding these ample accommodations for the storage of their produce, the present season has been so highly propitious for the hay crop, that they are troubled to find room for all the forage; and they will soon be under the necessity either of curtailing their manufacture and application of manure, or of building more barns. Doubtless, however, they find some alleviation for their troubles, in this respect, in the contrast presented by the condition of the Sluggard, whose worn-out acres and generally dilapidated appearance, under a ruinous "skinning" system have brought him to the necessity of requesting some Shylock to "salt him down" with a mortgage.

The Messrs. Lynde have been famous for their excellent butter and cheese; and were formerly extensively and profitably engaged in the dairying business;—their sales, in one of the last years of their operation in this line, amounting to over 12,000 lbs. of cheese, at 11 cents, delivered at the farm. Of late, they have turned their attention mostly to the stall-feeding of cattle, thus consuming the most of their products upon the farm. Mr. Barnard Lynde informed us that he had paid miller's toll the past winter, for some 600 bushels of grain, which he had fed out in this way.

MANUFACTURE OF MANURE. Every material upon the farm, valuable in the manufacture of manure, is

brought into requisition. Mr. John Lynde has not been able to avail himself of the advantages of a barn-cellar hitherto, on account of rocks below the surface; but we believe it is his intention to alter the arrangement of his buildings so as to obviate this difficulty. His practice, therefore, has been to throw in muck, under his stable floors, to the depth of three feet, in the fall, and in the spring it is taken out and mingled with his other compost. His yards are well covered in the fall with muck, turf, &c., and in the spring the contents are piled up, mostly under cover, remaining in this condition until the next fall, when the compost is carted out and spread as a top-dressing on grass-ground. His arrangements for the swine are excellent, and afford a large quantity of manure.

Mr. Barnard Lynde has been more successful in obtaining a cellar. Two years since, he commenced digging for one, and opened a trench about 14 feet wide and 8 feet deep, under the whole length of the barn, (70 feet.) The earth taken out was all carted to the field and spread as a top-dressing upon a moist piece of mowing. The effect was truly wonderful,—doubling the quantity of hay. One would not have supposed that earth taken out, to the depth of 8 feet, would have produced this effect; and it certainly affords substantial proof of the benefit to be derived from barn-cellars, where the salts are annually saved and made available. The earth under this barn is remarkably free from stone, and as the cellar never is effected by frost, it is Mr. Lynde's intention to keep widening it, annually, from time to time in the winter, by throwing the earth back on to the manure, in about equal quantities with it, until the whole is excavated. Stone posts are set under the timbers of the barn at suitable distances, so as to make all safe. He is thus provided with material for compost for some time to come, and the application of it in every form, so far, has produced highly satisfactory results. The contents of the cellar remain there until after haying, and then, at convenience, the mass is carted out into large and compact heaps, for the next spring's use.

The barn-yard is covered a foot deep with muck, soda, &c., in the fall, and after the hurry of spring is over, the contents are snugly piled, under cover, and in the fall carted out and spread as a top-dressing on his moist mowing-land.

Our attention was directed to a corn-field which had been dressed with a compost of muck and animal matter. Two old horses were killed late in the autumn, cut up into pieces of 15 to 20 pounds' weight, and mixed in compost with about 40 loads of muck. Upon each piece of horse-flesh a little slacked lime was sprinkled as it was laid on the heap, and soon after the work was completed, a powerful fermentation commenced. Early in the spring the heap was overhauled, and the animal matter was so thoroughly decomposed, that hardly a bone, of the size of a man's hand, was found remaining. This compost was applied to about 1½ acre, and the field planted to corn, which promises to yield a bountiful harvest.

Last season, ten or twelve stage-horses were taken in to winter. They were turned loose into a yard,

with a large shed for shelter and a rack for feeding; and some 500 loads of muck were spread over the bottom to absorb their droppings. The contents of this place were piled up under the shed in the spring, and it is now a black, free mass of fine quality.

The horse-barn has a cellar under the whole of it which receives the horse manure and all the wash from the house, and into which muck, turf, &c., are thrown from time to time, and the whole is worked over by the hogs. In these various ways, over 400 loads of manure have been made, which is now in a fine state of preservation for future use. We have been thus particular in noticing the arrangements of these farmers for making manure, because in our estimation proper attention to this department is the very starting-post in all good farming, certainly in this region of country.

FIELD CULTIVATION. About ten acres are broken up, annually, on these farms, as deep as the plow can be made to run, heavily manured with compost and planted, one year to corn and potatoes, and the next year stocked to grass with spring grain. The compost is spread on the top of the furrows and harrowed in. The crops of corn and of spring grain are always good, and in favorable seasons often very heavy. A large burden of hay is cut, filling the spacious barns completely.

A field of second crop clover particularly attracted our notice; and on inquiry we found that it had been broken up in the fall, three years since, to the depth of nine inches. The next spring forty loads of compost were spread on each acre and thoroughly harrowed in and the whole planted to corn, the crop averaging 86 bushels per acre, by actual measurement. The next spring, three bushels of barley, with half a bushel of herd's-grass and sixteen pounds of clover seed, were sown on each acre. The crop of barley was fine, and this year the soil is *completely filled* with the grass roots, not an inch of unoccupied space being visible, and the ground beautifully covered with the farmer's best carpet. The second crop is already fit for the scythe, and will turn out a very heavy swath.

The Messrs. Lynde are of opinion that true economy consists in sowing grass-seeds *broadcast* with a liberal hand; and as their land is thoroughly prepared to receive it, they in return harvest fine crops, both in quantity and quality. They are partial to the use of Southern clover, as an ameliorator of the soil, and estimate it highly as food for cattle, if sown thickly and properly cut and cured. They were formerly in the habit of fall-feeding their mowings, but of late years have discontinued the practice; believing the cattle's feet to be more injurious than their mouths,—particularly on the more recently seeded fields.

FEEDING AND CARE OF STOCK. None but the very best of animals are kept on these farms, and the same liberality is extended to them in feeding, that the lands receive in manuring. "Do well whatsoever is done," is a favorite maxim with these farmers. In consequence of this system of feeding, their two-year old cattle are as heavy as ordinary cattle at three years old. Their working-oxen are sleek and well-conditioned, requiring to be fed but a short time

to fit them for the shambles. Their milch cows are the best the section affords, and are well cared for, both in summer and winter; and, in short, no animal is suffered to lose ground, or to remain stationary, that is susceptible of further improvement. Doubtless this is the true course; and we find fully realized in the practices of these gentlemen the doctrine so often enforced, of cultivating no more acres than can be well manured, and keeping no more stock than can be made constantly to improve. In either case, if the acres begin to deteriorate in produce, the profits of labor are at once diminished; or if the stock begins to fall away, or, if growing stock, even to remain stationary, the profit of feeding is at an end.

In closing this hurried notice we have to remark, that these gentlemen have never been wedded to old customs, simply as such, but have ever been ready for substantial improvements; and probably a good share of their success as farmers, may be attributed to the fact that, for many years they have been intelligent and constant readers of one or more agricultural publications. Indeed, the intelligent observer, in travelling past these farms, would not need be told of this fact; he would recognise it by unmistakable, general appearances.

Improvements Practicable.

At a late Agricultural meeting in England, Lord Braybrooke in the chair, and several of the nobility, members of Parliament, and other gentry present, Mr. Colman, being about to return to the United States, was toasted and cheered. In reply he made a long speech, from which we copy the following:—

"The Flemish have a proverb which involves the whole system of agriculture—"Without forage, no cattle; without cattle, no manure; without manure, no crop." (Applause.) Now I take on myself, in the first place, to say that you are deficient in the saving of manure; and in the second, your crops are not near so large as they might be. I need not say that those gentlemen who have thought on the subject of liquid manure, affirm that it is of the greatest importance to the farmers of this kingdom; but on how few farms compared with the whole number is there any preparation made for the proper application of liquid manure! Here it is that the great waste is committed; and there is an immense draft made on your profits; for instead of sending out vessels to the far-off Pacific to fetch material to enrich your farms, you have within yourselves the means of enriching your land to an infinitely greater extent than it is now. (Hear, hear.) Then let me say that your crops are not so large as they ought to be. I know how incredulous the farmers are, and how hard to be convinced. Wesley said he could do anything with other people, but could do nothing with the farmers—(laughter)—but I do not despair that, with intelligent men, under that spirit of inquiry which is everywhere awake, they will come at last to be convinced by facts, attested and confirmed by the most decisive experience. I say your crops are not so large as they might be; and what, I will ask, is the probable average crop of wheat throughout Great Britain? I should

give a large average if I said it was 30 bushels an acre. (A voice—"It is not.") I doubt if it is 25, taking the whole of England together. What should it be? It should be 60. (Cries of "No, no.") It should be 60. (No, no.) You may say no, but I know farms in this country which produce an average of 60 bushels an acre, I know several which produce 50 or 56 in this county. And what has been done by one man may be done by another; and I despise the man who will fall short of his ambition to reach the very ultimatum of perfectability. (Applause.) If I had the spurs which you put into your race-horses I would prick them up. How are these crops produced? I have quoted the Flemish proverb—"Without forage, no cattle; without cattle, no manure; and without manure, no crops." Now the Flemish farmer keeps twice as much cattle, I may say three times as much, as the English farmer; not so improved a race, but they keep good cattle. Why is this? Are you behind them in intelligence or in the desire to better your condition? Have you not the means? Is there any reason under heaven why you could not do that? No. But you are more negligently. Now I had lately stated to me a fact with respect to the value of manure upon a farm, on which I rely. A valuer was sent to value the manure upon some land about to be sold, and he estimated the manure per acre; how much was it at do you think? Ten pounds! Thirty shillings one gentleman told him was the usual price—at £15—at £20—will any one bid more?—it's going—no; at £45 per acre; and the party who had manured in this way was a shrewd man, who would not have put it on if he had not seen his way to a fair return for it. Manure is, in fact, the life-blood, it is the foundation of agriculture. (Applause.) We hear of agricultural schools and the researches of learned chemists, which are to turn everything into gold. Why chemistry has long been understood, at least to this extent, that we have not to learn the value of manures. And I say let the chemist go on; he will tell you what he has found when he discovers it. And in the meantime do you go on saving all the manure you can, and bestowing it with the most liberal hand. (Applause.)"

Apple Orchards.

We are glad to notice at length that we are getting a right class of men hold of our apple orchards. The subject is becoming reduced to a science; and a man who does not make his trees grow rapidly and produce abundantly, may possibly pass for a worthy, honest man, if not otherwise disqualified for the title, but he must be put down as a great ignoramus, and a most negligent, slovenly manager, so far at least, as the subject of fruit is concerned.

People who pay attention to their fruit trees are sure to make them bear. We have a glorious fruit soil and climate, the best on the face of the globe, and we ought to produce it in such quantities, that every household should be profusely supplied with the choicest varieties throughout the year. The best may be as easily raised as the worst, as the trees of such are not unfrequently the greatest bearers.

Shrewd men, who raise fruit for sale, now generally select one, two, or at most three or four kinds, which are of standard demand in market, good yielders, and proved to grow in perfection where cultivated, and confine themselves entirely to these. They see that they are properly set out, properly manured, the land properly cultivated among them, properly trimmed, and properly managed in every particular, and they are sure to find an abundant supply of choice fruit on their trees in the autumn.

A gentleman within our knowledge, has a small orchard on the Hudson River, of less than seven acres; which produces from \$500 to \$750 worth of apples annually. This is not one year of plenty and another or two of famine, but is a steady, regular average yield. This man does not have what we hear often called by haphazard farmers *bearing years*, or rather he has no other. And all this is secured by the simplest process, viz: *good management*. He scrapes the trunks of his trees every year; and immediately, and before the insects and their larvæ can find a hiding place, when thus exposed, he gives them a thorough drenching of wood ashes and hot water, as thick as can be made to run freely from a whitewash brush. This practice, with lime occasionally added about the roots at the trunk, with the management we have before indicated, gives the satisfactory results we have mentioned. After carefully hand-picking his apples, he heads them up in barrels, with a few auger holes in each end, which are then thrown upon their bilge, or sides, and allowed to remain exposed to the weather under the trees, till there is danger of freezing, when they are housed, if not previously sold.—*Am. Agriculturist*.

THE WAY TO HARROW. Col. Capron, in his Prize Essay, says that farmers generally "do not work it right" about their harrowing. His words are:—

"The usual method of harrowing is to follow the plow in converging circles to the centre of the land. This is wrong. The harrow should commence in the centre of the land, where the plow finishes, and harrow lengthwise the furrow, in diverging circles from the centre, lapping the harrow at least half way, exactly the reverse of the usual method. This, it will be found, instead of harrowing up the sod, smooths it down, covers it better, gives the cattle a better surface to walk upon, requires less power, and does the work more effectually, as any one will readily discover, who will give it a trial."

TO MAKE A HORSE STAND WHILE YOU MOUNT.—Get on and dismount four or five times before you move him out of his tracks, and by repeating this, any horse will stand still.

TO CURE A BITING HORSE. Biting is a bad and dangerous habit. It is said that the bite of a horse that is not mad, will sometimes produce madness.—The following is regarded as an effectual, but barbarous remedy, but it is to cure a savage habit. A horse would better burn himself than bite people repeatedly. Roast or bake a piece of meat, and present

it hot as he attempts to bite. Be cautious lest he bite a piece of live flesh instead of hot meat.—*Domestic Animals*.

The Markets.

BRIGHTON MARKET, Thursday, Nov. 23.

At market, 600 Beef Cattle, 900 Stores, 22 pairs Working Oxen, 48 Cows and Calves, 12,000 Sheep and Lambs, 500 Swine.

Prices—Beef Cattle—Extra \$6 00; first quality, \$5 75; second, \$5 00.

Stores—Two years old \$12 to \$16; three years old \$18 to \$25.

Working Oxen—Sales at \$67, \$75, \$80, \$93.

Cows and Calves—\$19, 20, 24, 27, and \$35.

Sheep and Lambs—\$1, 1 25, 1 50—extra lot sold at \$5 a-piece.

Swine—4 to 5; Retail 5 to 6; still hogs 4 4c.

NEW YORK WOOL MARKET, NOV. 17. The improvement mentioned in our last has been fully sustained during the week and many lots have changed hands. Sales have been mostly to those engaged in the business rather than to manufacturers, though some of the latter have bought for immediate use.

The stock on hand is small, and prices have improved fully ten per cent. from the lowest point of depression. The season is over for manufactured Goods, and we cannot say prospects are encouraging for any great improvement in prices at the opening of spring business. Present prices for fabric and raw material cannot long exist. If it continues, we hardly think manufacturers will go on producing in the face of a certain loss; and the consequence will be, the cheap labor of Europe will carry the day, and growers of wool will have to seek other markets for their products.

We hear of sales during the week of over 50,000 lbs. of all grades, and stocks much smaller than usual at this season, with but little coming forward. We do not vary our quotations from last week, but say purchases could not be made, of either grade, except at a slight advance on those prices.—*Dry Goods Reporter*.

Boston, Nov. 23. Wool. There have been some sales of fleece wool during the past week at a slight advance in prices; the stock in market is light, and unless a supply is soon received from the country, our market will be bare. A large portion of the clip in Vermont, New York, and Pennsylvania, remains unsold—the growers expecting an advance. The present state of the woolen manufacturing business will not, however, warrant the expectation of any considerable improvement in prices.—*Courier*.

Quotations without change.

FANEUIL HALL MARKET.

WHOLESALE.					
Beef, fresh, lb.	7 a	12	Apples, barrel,	1 50 a	2 50
Mutton, 1st qual.	6 a	10	do. dried, lb.	0 00 a	0 00
2d "	5 a	8	Beans, bush,	1 50 a	1 75
Lamb,	4 a	8	Peas, bushel,	0 00 a	0 00
Veal, lb.	6 a	10	Potatoes, barrel,		
Pigs, roasting,	1 00 a	1 25	New,	2 00 a	2 75
Chickens, lb.	10 a	12	Common,	3 00 a	0 00
Turkeys,	10 a	12	SEED—RETAIL.		
Geese, mongrel,	1 25 a	1 50	Clover, North, lb.	10 a	12
Pigeons, dozen,	1 00 a	1 25	Southern,	8 a	9
Pork, per 100 lbs.	5 50 a	6 75	White Dutch,	00 a	25
Lard, best, pr. bbl.	7 75 a	8 50	Lucerne, or French,		33
Western, keg,	9 00 a	00 00	Red Top, bush,	3 25 a	3 50
Butter, lump, lb.	23 a	27	do. Top, bushel,	1 25 a	0 00
do. firkin,	17 a	25	Southern,	65 a	88 1/2
Cheese, new milk,	8 a	10	Orchard Grass,	— a	2 00
do. four meal,	5 a	6	Fowl Meadow,	2 50 a	0 00
Eggs, doz.	20 a	22			

Disinfecting Property of Coffee.

Coffee is one of the most powerful means not only of rendering animal and vegetable effluvia innocuous, but of actually destroying them. A room in which meat in an advanced degree of decomposition had been kept for some time, was instantly deprived of all smell on an open coffee roaster being carried through it, containing a pound of coffee newly roasted. In another room, exposed to the effluvia occasioned by the clearing out of a dung-pit, so that sulphuretted hydrogen and ammonia in great quantities could be chemically detected, the stench was completely removed within half a minute on the employment of three ounces of fresh roasted coffee, whilst the other parts of the house were permanently cleared of the same smell by being simply traversed with the coffee roaster, although the cleansing of the dung-pit continued for several hours after. Even the smell of musk or castoreum, which cannot be overpowered by any other substance, is completely dispelled by the fumes of coffee; and the same applies to the odors *assafoetida*. It was remarked, however, that in general, animal effluvia are more readily affected by it than vegetable. That here acid neutralization, and not mere envelopment of matter, takes place, is shown from this; that the first fumes of the coffee are imperceptible, and continue so until a point of saturation, so to speak, is reached, whereupon the obnoxious smell disappears, and that of the coffee predominates. The reverse happens with other aromatic vapors; and even with acetic acid and chlorine. Here both co-exist until the one completely preponderates. The simplest form in which to use it against contagious matter is in powder. The well dried raw bean is to be pounded in a mortar, and to be stewed over a moderately heated iron plate until the powder assumes a dark-brown tint. Caffeic acid and the empyreumatic coffee oil, act more readily in a very minute quantity.—*London Medical Gazette.*

Artificial Mode of Increasing the Quantity of Cream.

A Mr. Bekaert, of Brussels, has discovered a mode, he says, by which the quantity of cream, on a given quantity of milk, may be increased over and above what would rise upon it in the natural way.

His process is thus described: To every two quarts of new milk, a table-spoonful of a liquid, made by dissolving in a quart of water, one ounce of carbonate of soda, one teaspoonful of a solution of caruma or turmeric, and three drops of marigold water. The addition of the solution of soda, he states, causes a larger quantity of cream to rise to the surface of the milk than is procured in the ordinary process. The other ingredients are for the purpose of improving the color and quality of the butter made from the cream.

We have never tried the experiment, and cannot vouch for the correctness of the statement, nor do we know upon what principle the soda acts, provided it actually produces the result which he states. If any how, it must be by having a greater affinity with some elements of the milk than the cream has, and

by combining with it, allows the cream to rise.—*Farmer and Mechanic.*

Domestic Economy.

RECIPE FOR COLORING BLUE WITH PURSLEY. Take a bushel of garden pursley, [or purslain] boil it till soft, in an iron pot or kettle, and strain off the liquor; boil one pound of logwood, (also in iron) for two hours, strain off the liquor and mix with the pursley water; then dissolve half a pound of alum in soft water sufficient to cover three pounds of yarn, put it in a brass or copper kettle and simmer the yarn in it for three hours, then wring and put into the dye and simmer three hours with frequent stirring. The depth of the color may be varied by varying the quantity of logwood.

This is a very cheap and desirable blue dye.—*Ohio Cultivator.*

TO COOK A HAM. Boil a common sized ham four or five hours, then skin the whole and fit it for the table: then set it in an oven for half an hour, then cover it thickly with pounded rusk or bread crumbs, and set it back for half an hour. Boiled ham is always improved by setting it into an oven for near an hour, till much of the fat fries out, and this also makes it more tender.

BUCKWHEAT CAKES. The griddle on which cakes are baked should *never be touched with grease*. Firstly, because it imparts a rancid taste to the cakes. Secondly, if a cooking stove be used, it fills the kitchen, if not the whole house, with the smell of burnt grease—to say nothing of the parade, and boasting to one's neighbors, by betraying what we are to have for breakfast. Wash the griddle with hot soap suds; scour with dry sand, and when heated for use, rub it well with a spoonful of fine salt and a coarse cloth. It will then be ready to receive the cakes. After each cake is removed, the salt rubbing must be repeated. If the first does not succeed, try it again, and you will ever after follow this advice of an

OLD HOUSEKEEPER.

Another says,—Use soapstone griddles, which require no greasing or salting.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy,	- - -	50 cents.
5 copies, sent to one address,	- - -	2 00
10 " " " " "	- - -	3 00
16 " " " " "	- - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. II.

WINDSOR, VT., JANUARY, 1849.

No. 9.

THE SCHOOL JOURNAL.

For the School Journal.

A New Year's Greeting to School Children.

FOR JANUARY, 1849.

"O life! how pleasant is thy morning,
Young fancy's rays the hills adorning."

My Young Friends: On this day of good wishes, I wish you all a Happy New Year. Yes, children, I wish you all that come to school,—boys and girls, masters and misses,—a Happy New Year. May you, each of you, be happy this year in your school, happy in your homes, happy in your studies, happy in your work, happy in your visits and plays, happy in all the joys of youth.

"Their buxom health of rosy hue,
Wild wit, invention ever new,
And lively cheer of vigor born;
The thoughtless day, the easy night,
The spirits pure, and slumbers light,
That fly the approach of morn."

The State Superintendent, and all the Superintendents of schools, I know, would wish you all a Happy New Year, if they could see your faces to day.

On this new year's day, when you see so many smiling faces, and hear so many good wishes, do not forget Him who has made you *capable* of happiness, and has given you, too, so many things to make you happy. Do not forget, to-day, the God who gives you health, home and friends, clothes to wear, food to eat, and books to study. A stone is not capable of happiness; so you do not wish the stones a happy new year. And it is because God has made you capable of happiness that you are happy, and take pleasure in running, playing, talking, reading, and visiting. Consider, children, how much more you have to make you happy than the children who are born slaves, and are sold and driven about like cattle. Consider, too, how much more the children in Vermont have to make them happy, than the children in Africa, who cannot go to school as you do, but grow up in ignorance, and are taught to worship idols. These children, too, when happy in their plays, are sometimes stolen from their parents, put in irons, and sold for slaves. Surely, if any children in the world may be happy, *you*, that have such pleasant homes among the hills of Vermont, may be happy children this year.

You have food and clothes, but remember good food and nice clothes cannot make you happy, if you are *bad children*. You may dress a naughty girl in silk, and she will not be happy. You may dress a naughty boy in fine broadcloth, and he cannot be happy. New

hats and coats, and cloaks, and shawls and silks, will not do half so much to make you happy as a *pleasant temper*. Those children are not most happy that have the *best clothes*, but the children that have the *best dispositions*, and are most contented with what is given them. Good children can be happy in *poor clothes*. Bad children cannot be happy in *any clothes*.

Some people think money will make them happy. But money will not make bad children or bad men happy. Did money make Judas happy? No. The money he thought would make him happy, made him miserable, because he was wicked; so he threw away the money, and went and hanged himself.

It is the *mind* that makes you happy or miserable. If you would be happy, then *cultivate your minds*. Gain knowledge. Do right. Knowledge and virtue will make you happier and richer too, than all the gold of Mexico.

The object of the Common Schools in Vermont is, to make the children all rich,—not rich merely in gold and silver, but rich in knowledge, and virtue, and happiness,—rich in the best of all riches, the riches of the mind, riches that cannot be stolen by thieves, or burned by fire, or lost in the sea. Yes, children, the schools you attend, if you *learn*, will make you richer than all the gold mines in the world. I wish you all happy this year in enriching your minds with knowledge and virtue. The good are rich. The good are happy. Paul was happy in a prison. Nero was not happy in a palace.

"Nae treasures nor pleasures
Could make us happy long;
The heart ay's the part ay,
That makes us right or wrong."

If you would be happy this year, young friends, you must learn *self-government*. Some children think the way to be happy, is to do as *they please*; but this is the way to be miserable. Byron was a great man, and all the world praised him, but he was miserable because he did not learn to govern himself when young. Buonaparte could govern an army, but could not govern his ambition and his temper, and so he was miserable. Alexander conquered the world, but did not govern himself. He got angry and killed his best general, and then died in a fit of intoxication. If you would be happy, then, govern your desires and passions, not doing as *you please*, but doing as the Bible tells you, as your conscience tells you, and as your parents tell you. Do not get angry, for "anger resteth in the bosom of fools."

If you wish to be happy yourselves, children, you must try to make *others* happy. What can you do

this year to make the scholars and the teachers happy in school? What can you do to make your brothers and sisters and parents happy at home? If you are naughty and idle at school, or fretful and disobedient at home, you will make others unhappy, and be unhappy yourselves, too. There can be no happy new year for an idle, disobedient child.

Again, my young friends, I wish you all a Happy New Year. I wish your teachers a Happy New Year, in their schools. I wish your parents, too, a Happy New Year,—a Happy New Year in having good children at school,—a Happy New Year in having good children at home.

JAMES TUFTS,

Sup't. Com. Sch's. Windham Co.

N. B. The teachers that please may read this greeting in school.

School Books.

The law entrusts the duty of selecting school books to the District Committees. No State, or County, or Town Superintendent, or Teacher, or Convention of Teachers, has any legal authority in the premises. They may recommend books,—any of them may; but after all it is for the Committee of each district to determine what books shall be used in the schools entrusted to their care. And the Committee will do well to be somewhat tenacious of their rights in this respect. No Teacher should be allowed to introduce new books without their express direction; no authority from abroad should be allowed to trample on their own.

A proper respect is of course due to the recommendations of others, and especially to the opinions of experienced teachers, and gentlemen who have devoted much attention to the subject. When such a body of men, for instance, as our State and County Superintendents, after mature deliberation, unite in any recommendation in regard to school books, that recommendation is entitled to very great weight,—much more, certainly, than the opinion of any individual, be he Superintendent, Teacher, or what not; unless there is something special in the case, to entitle the individual's opinion to far more than ordinary regard.

In 1846, the State and County Superintendents, in a Convention held at Montpelier, recommended the following books:

Webster's Common School Dictionary.

Sanders' Primer; do. Spelling Book and Readers; and when a greater variety of Readers is required, Palmer's Moral Instructor, and the Educational Reader and Moral Class Book by S. S. Randall.

Mrs. Willard's Abridgement of United States History.

Smith's First Book of Geography for beginners, and Quarto Geography; also, Morse's Quarto Geography, for reference, and Mitchell's Outline Maps.

Wells's School Grammar.

Shurtliff's Governmental Instructor.

Colburn's First Lessons.

McElligott's Young Analyzer.

Holbrook's Self-Instructor, No. 1.

Root's System of Penmanship.

In 1847 the subject of arithmetics was further considered by the same body of men, and the following recommendations adopted:—

Resolved, That this convention, inasmuch as Adams' Arithmetic (Daniel Adams) is regarded by us superior to the other treatises on Arithmetic now before the public, except the series of Professor Davies, and inasmuch as Adams' is in very general use in our schools, would not at this time recommend any violent or hasty measures, by way of introducing any new book; but impressed with a firm and deep conviction, that Davies' Elementary and Common School Arithmetics, whether used as a means of securing a thorough mental training, or for practical purposes, in the highest and most liberal sense, are decidedly superior to any other with which we are acquainted, we would unhesitatingly and strongly recommend the introduction of these books, so fast as a change can conveniently be made.

They also recommended Ackerman's First Book of Natural History and Cutter's Physiology.

In regard to some of the books here named, our opinion may not perfectly coincide with that of the Convention; but we should certainly be slow to set aside such a recommendation, especially in favor of any other books known to have been duly examined by the Convention.

In some cases, County Conventions have adopted this recommendation; in others there has been more or less variation from it. In Windsor County, no other books, and but part of these, have been recommended by any Convention representing the educational interests of the County.

Our attention is directed to this subject just now by correspondents and friends who complain of changes of school books.

In regard to teachers, no one who deserves to be employed will find any difficulty with any of the good books that are now in the market. If the teacher finds the school tolerably well supplied with any of the Arithmetics on sale, for instance, he can teach his classes to advantage, or he is not fit to teach at all. It is not even necessary (though very desirable) that all scholars of the same standing, and in the same class, should have the same book. In teaching Arithmetic it is his business to work enough at the lesson, in school and out of it, to be independent of a text book, and able to turn any one to good account. A change merely out of deference to his preferences, when he is comparatively a stranger and has no claims to deference above others of his class, only prepares the way for another change next year. Let the Committees avoid it; and take care themselves to make no changes but such as are demanded by good reasons, and then to make such changes as will be likely to last. It is their duty to protect the districts from imposition in regard to books, from whatever quarter it may come.

It is related of Socrates, the greatest master of ancient Greece, that he saw in a dream a beautiful white swan flying towards him from the altar of Venus, and fighting in his lap. In a little time the bird

spread his wings again, and rising into the air, went up, up, till it disappeared in the clear sky. The next day, while he was relating the dream to his pupils, Aristo came leading to him his son Plato. Socrates fixed his eyes upon the lad, surveyed his broad high forehead, and looked into his deep clear eye, and exclaimed, "Behold the swan of my school." He nursed the boy with parental pride and parental hopes; and the swan of his school became the noblest mind in the literature of his country, and has impressed its influence more sensibly upon the Christian ages than any other uninspired intellect.

Examination of Teachers.

Mr. Tufts, the Windham County Superintendent, has, in the Eagle, some good remarks on the influence of the present system of examining Teachers.

"No one," he says, "can be present at the examination of teachers, especially if there are many to be examined, without being satisfied of the beneficial influence of the examination. The teachers who are best qualified become sensible of some deficiencies, and those who are poorly qualified, even though they may just get a certificate, must feel how deficient they are, both by their own imperfect answers, and by hearing the more ready and accurate answers of others. In the course of a day's examination, too, many valuable suggestions may be thrown out, beneficial to teachers; and, above all, the examination tends to awaken among teachers a desire for improvement and a spirit of enterprise and enthusiasm in their profession.

"These examinations are beneficial also in directing the attention of teachers and scholars in our academies to the common, but neglected, branches of education. The instructors in these academies have complained that their scholars have been unwilling to pay attention to the common branches taught in district schools; and that when notoriously deficient in these branches; but now these instructors find their scholars more willing (though not so willing as they should be) to attend to Orthography, Reading, Geography, Grammar, and Arithmetic. In these examinations, some that are called good scholars in the higher branches, appear very deficient in the common branches, and they evidently appear deficient, not because they have forgotten, but because they never understood these branches. The teacher in one of our academies remarked to me that he had advised a certain young lady to study the common branches. She thought there was no need of it, and so devoted her time to Algebra and French. But when the examination came, this young lady appeared deficient, and very deficient in Geography, Arithmetic, and Spelling; and her teacher thought it would be a good lesson to her, and that he should find less trouble in getting his scholars to attend to these studies in future."

BEAT THIS, IF YOU CAN! We saw by the Register of the Medford High School, the other day, that, during a term of four months, with 90 scholars, there were but 61 tardinesses in all!—and 60 scholars not

tardy once during that long winter, snow-drifting, term. What will astonish some of the slack ones most, is the fact, that no scholar in that school is required by the teacher to bring an excuse for being tardy. The common practice is not in operation,—the common rule not in force. This state of things was not brought about by the use of that rule. The teacher went to work with those scholars, and convinced them of the evils of being tardy, and made it *disreputable* for a scholar to be behind the time. That is the feeling now. No scholar can come in late without a blush on his cheek, and his footfalls ringing in his ears so that he hardly knows the way to his seat. "Shame and confusion of face" once felt by scholars for being tardy in any school, and there is no need of asking for excuses from parents. It is easy to teach school, and pleasant to attend school under such circumstances. It is an honor to the State to have such. Let there be hundreds of them—yes, thousands.—*Scholar's Penny Gazette.*

Teachers should Lecture.

Almost every male teacher can prepare himself to speak before the parents of the district upon some topic connected with the improvement of the school. He can tell how a school-house should be arranged for the convenience and comfort of the scholars; the advantages and economy of dry wood over green; the value, both to the pupil and the school, of regular and punctual attendance; the necessity of having every scholar supplied with books and other implements of labor, &c., &c. Or, the teacher could exercise a class in some study a part of the evening, and then occupy a few moments in showing the audience what is needed to make the school more efficient. He may have an interesting exercise by drilling a class upon outline maps. Hang all the maps up and show their advantages in the study of Geography, and in this way he will most surely influence the district to purchase a set for the school. The publishers will let him take a set of maps for this object. Let him obtain one of Cornell's new globes (\$ 3.00) and give a lecture upon that. A little preparation will enable him to do this with profit to himself and to the district. We know of teachers who have done themselves much credit, and their schools much good in this way. They have gained a reputation which has been of service to them in commanding more wages. The only way for teachers to increase their pay is to increase their fidelity and zeal in their profession.—Teachers have only to inform themselves as to the best methods of teaching,—what and how to teach children of all ages,—and show a hearty devotion to their work, and they will receive a hearty compensation.

Every teacher should interest himself in the circulation of the School Manual. Hundreds of parents would take the paper if teachers would make a little exertion to obtain their subscriptions. We must rely upon teachers to awaken a deeper interest in the cause of education. This is their appropriate work. It is in their power to double the value of our schools in a single year.—*Conn. School Manual.*

Origin of Proper Names.

To the Editor of the School Journal:

I have, for some time, been collecting such Proper Names (names of persons) in our language as appear to be derived from Common Names. To those in our schools who are studying language the list may not be unacceptable as a sort of new year's offering.

It is well known that in the language in which the Old Testament was written and in the kindred dialects, the names of persons have an *appellative* origin. Thus, *Adam* signifies *man*; *Jacob* is properly a verb in the future tense, and *Mohammed* may be taken as an Arabic participle. The principle of deriving proper names from common is abundantly developed in modern languages, as the German, English, &c.; and in the Indian dialects in this and other countries we hear of such heroes as Long Nose, Swift Runner, Red Jacket, &c.

The principle referred to is seen much more extensively in the English tongue than one might, at the first view, suppose. May not our appellative or significant proper names be almost, if not quite as numerous as those which are merely arbitrary? The former amount to some hundreds. May it not be true in regard to some names that are *apparently* arbitrary, that they were once significant? May not their significance have disappeared through a slight change as to their form?

Though my list has been prepared with considerable care, it is, undoubtedly, very far from being complete. A few years ago it was somewhat enlarged by a reference to one which appeared, I think, in the *VERMONT CHRONICLE*. My object has been, to transcribe only such names as are clearly of *English* origin. A few, as *Crookshanks* (*Cruikshanks*?) may have had another origin, and a few, possibly, may have assumed their present form merely from caprice. Will some of your juvenile correspondents collect additional classes of names? Especially will some one, who may be versed in such matters, give us a little of the history of English names in general? It would be gratifying to know when and in what circumstances such men as Mr. Farmer and that most prolific personage, Mr. SMITH, first began to be heard of.

Respectfully yours, A. O. H.

Barnet, Dec. 14, 1848.

LIST, &c.

1. Names derived from Occupations.

Archer,	Fisher,	Salter
Baker,	Fowler,	Singer,
Barber,	Fuller,	Sawyer,
Butler,	Glover,	Shepherd,
Brewer,	Harper,	Storer,
Carpenter,	Hooker,	Stocker,
Carter,	Hooper,	Skinner,
Carver,	Hunter,	Sexton,
Collyer,	Hawker,	Smith,
Cutler,	Joiner,	Tanner,
Cook,	Mason,	Tinker,
Currier,	Miller,	Turner,
Chandler,	Mercer,	Thatcher,
Cooper,	Mower,	Thrasher,
Decker,	Painter,	Taylor,
Draper,	Porter,	Usher,
Dresser,	Potter,	Weaver,
Dyer,	Piper,	Wheeler,
Falconer,	Plummer,	Wright.
Farmer,		

Walker,	To which may be added, Barker, Trotter, Also the compounds,	Sleeper,
Arrowsmith,	Wainwright,	Dykeman,
Goldsmith,	Cartwright,	Waterman,
Shoemaker,	Woodman,	Boardman,
Slaymaker, (?)	Coalman,	Bowman,
Leadbeater,	Seaman,	Chapman.
Wheelwright,		

2. Names derived from Personal Qualities, or, from Adjectives.

Long,	Moody,	Clement,
Short,	Rich,	Worthy,
Small,	Poor,	Wise,
Little,	Good,	Low,
Strong,	Savage,	Forward,
Proud,	Sharp,	Darling,
Hale,	Sweet,	Lovely,
Gay,	Swift,	Learned, (Larned ?)
Young,	Sterne,	Sterling,
Prime,	Smart,	Priestly.
Slack,	Noble,	

To which may be added,

Fearing,	Whiting,	Hunting,
Rising,	Twining,	Bunting.

3. Names derived from National Adjectives and those denoting color.

English,	White,	Brown,
French,	Gray,	Green.
Black,		

4. Compound Names; denoting, 1. Personal qualities; 2. Qualities of things, &c.

Whitman,	Lightfoot,	Blackwell,
Blackman,	Proudfoot,	Saltmarsh,
Greenman,	Crookshanks,	Longstreet,
Merriman,	Sheepshanks,	Hartstone,
Silliman,	Longfellow,	Blackstone,
Wiseman,	Fairchild,	Greenleaf,
Wildman,	Fairbrother,	Fairbanks,
Crossman,	Gaylord,	Berryhill,
Loggins,	Ironside,	Hemphill,
Tallman,	Birdseye,	Greenhill,
Lowman,	Newcomb,	Woodbridge,
Pretymann,	Goodhue,	Waterland,
Goodman,	Hapgood,	Whitefield,
Truman,	Lovjoy,	Whitehill,
Fairman,	Farewell,	Winterbottom,
Freeman,	Playfair,	Butterfield,
Eastman,	Bidwell,	Tarbox,
Broadhead,	Treadwell,	Woodhouse,
Peabody,	Goodyear,	Hillhouse,
Freebody,	Hardy,	Fleetwood,
Armstrong,	Hardcastle,	Boltwood,
Bloodgood,	Treadway,	Blackwood,
Goodenough,	Paddleford,	Greenwood,
	Goodrich,	Underwood,
		Butterworth.

5. Names derived from Offices, &c.

Chamberlin,	Ensign,	King,
Marshall,	Sergeant,	Pope,
Burgess,	Prince,	Lord,
Warden,	Steward,	Bishop,
Dean,	Knight,	Abbot,
Page,	Earle,	Monk,
Squire,	Duke,	Sage,
Parsons,		Champion.

6. Names derived from the Social Relations, &c.

Child,	Minor,	Guest,
Ladd,	Tenant,	Fellow,
Mann,	Masters,	Outlaw.
Virgin,		

7. Names derived from Members of the Body, &c.

Hand,	Arms,	Blood,
Foot,	Head,	Breath.

8. Names derived from Topographical Terms.

Town,	Road,	Dale,
Parish,	Field,	Marsh,
Street,	Orchard,	Pool,
Lane,	Dike,	Brooks,
Bridge,	Platt,	Rivers,
Haven,	Heath,	Park,
Shore,	Hedge,	Pitt,
Fenn,	Vineyard,	Hill,
Banks,	Grove,	Mountain,
Ford,	Bowers,	Waters,
Paddock,	Boggs,	Pond.

9: Names derived from Buildings, &c.

House,	Post,	Booth,
Frame,	Stil,	Castle,
Church,	Court,	Wall,
Temple,	Chambers,	Brace,
Shedd,	Camp,	Gates.
Hall,		

10: Names derived from Trees, Plants, &c:

Ash,	Rush,	Lily,
Beach,	Thorn,	Onion,
Maple,	Hawthorn,	Blossom,
Reed,	Cobb,	Berry,
Root,	Weed,	Rice,
Lemon,	Rose,	Bush,
Wood,		Plant.

11: Names derived from Metals, &c.

Silver,	Flint,	Stone,
Gold,	Steel,	Sands,
Marble,		Clay.

12: Names derived from Animals.

Fox,	Wolfe,	Buck,
Badger,	Stagg,	Roebuck,
Palfrey,	Lamb,	Hart,
Bull,	Lyon,	Doe,
Colt,	Redheifer,	Hare,
Barrow,		Hogg.

13: Names derived from Birds.

Jay,	Hawkes,	Stork,
Finch,	Pheasant,	Crane,
Partridge,	Martin,	Heron,
Pigeon,	Nightingale,	Bird,
Drake,	Swan,	Wren.
Robbins,		

14: Names derived from Fishes.

Pike,	Fish,	Talbot,
Herring,	Roach,	Sturgeon.
Salmon,		

15: Articles of Dress and Use.

Tucker,	Gage,	Brush,
Lining,	Gunn,	Scales,
Stocking,	Cannon,	Sickles,
Webb,	Bellows,	Swords,
Cotton,	Greaves, (Graves?)	Ropes,
Hyde,	Jewel,	Ball,
Leather,	Coulter,	Bell,
Bacon,	Staples,	Peck,
Case,	Locke,	Shields,
Cone,	Key,	Button,
Trapp,	Coffin,	Physic.

To which may be added the following common nouns:

Love,	Devotion,	Bliss,
Joy,	Death,	Price,
Hope,	Blessing,	Law.
Worth,		

16: Names derived from Points of the Compass.

East,	North,	South,	West,
-------	--------	--------	-------

17: Names derived from the Heavenly Bodies, Seasons, &c.

Moon,	Gale,	Frost,
Starr,	Morrow,	Rain,
Winter,	Weeks,	Snow,
Spring,	Christmas,	Showers,
Cloud,	May,	Twilight,
Day,	June,	Dewey,
Doubleday,		Starkweather.

18: Names derived (apparently) from Verbs.

Grant,	Hunt,	Mix,
Dodge,	Chase,	Breed,
Dart,	Hatch,	Borrow.

19: Terms used in Emblazony; as Dexter, &c.

20: Names in the possessive, denoting Descent.

Dixon, (Dick's son),	Simson,	Clarkson, &c.
Johnson,		

ways to do what my conscience told me to be a duty, and leave the consequence to God. I shall carry with me the memory, and I trust the practice, of this parental lesson to the grave. I have hitherto followed it, and have no reason to complain that my obedience to it has been a temporal sacrifice. I have found it, on the contrary, the road to prosperity and wealth, and I shall point out the same path to my children for their pursuit."

Moral Education.

NO. X.

RECAPITULATION.

CULTURE OF THE CONSCIENCE. From the view we have presented of Moral Education, the full development of the CONSCIENCE would seem to be the chief aim of the educator, the grand purpose—which should never for a moment be lost sight of. Nothing should be neglected that has a tendency to purify, strengthen, and exalt this DIVINE LIGHT within; no means be overlooked that can render it quick to see, powerful to command. And all this should be effected chiefly by keeping it continually in exercise. The effects of precept were shown to be faint and transitory; while the results of steady, regular practice were found to be deep and lasting. In this respect the conscience agrees with all the powers of body or of mind. A man may be fully instructed as to the improvement of his muscular powers; he may know the precise manner by which force of arm or agility of limb is to be acquired; his theory for the improvement of the memory, for the development of the power of fancy or imagination may be perfect, unexceptionable; yet if he has not practiced what he knows; if these wondrous faculties are left unexercised, to himself his knowledge will be wholly unavailing; he can neither wield the ax, nor contend in the foot-race; he can neither call to mind historical events nor draw upon his creative imagination. If, then, man has been so constituted by his Creator, that it is by practice alone that any of his powers are to be developed and strengthened, surely it is the especial duty of parents and teachers to take unwearied pains continually to discipline by continual use this most valuable of all the faculties, which has been beautifully termed "the sparkle of the purity of man's first estate." But, alas! in how many of our schools or families, is the slightest attention bestowed on this important matter! What is the idea of education in the minds of the great mass of mankind? Is it anything more than the mere culture of the intellect, and even that in the most superficial and partial manner? Do men look for more, even from the very highest of our schools, than that the child shall be prepared for the active business of life? shall learn how most readily to "put money in his purse!" And even if a few, a very few parents do bestow some slight attention on the moral nature of the child, do they not, one and all, rely almost exclusively on precept, though sad experience has shown it to be wholly inefficacious?

TIME. What is the proper time for the commencement of moral education? It can hardly begin too soon. With parents, a good beginning may be made

INDEPENDENCE OF PRINCIPLE. Lord Erskine was distinguished through life for independence of principle; for scrupulous adherence to truth. He once explained the rules of his conduct, which ought to be deeply engraved on every heart. He said, "it was a first command and counsel of my earliest youth, al-

before the end of the first year. But this should be by *prohibitions*, not by *commands*. If self-willed, and inclined to obstinacy, as very many children are, it is easy to *prevent* them from action, while it may be altogether impossible to compel them to compliance.—A child may lead a horse to water, the strongest man cannot force him to drink. Let the first exercises of obedience, then, by all means be prohibitions. When the *habit* of submission has been formed, which it will soon be if we manage prudently, if we are neither too lax nor too severe; when obedience has thus become a habit, commands may be issued without danger. Resistance is highly perilous in early life. One successful opposition may be ruinous. Commands, therefore, should be rare; should never be given unless we are determined to carry them out. It is safer, generally, that they take the form of requests.

Meanwhile the conscience may be appealed to, as soon as the child can answer yes and no, for it is surprising how early the ideas of right and wrong are developed. Some have thought that these appeals may be too frequent, and thus lose their effect. But such an idea is altogether fallacious. The thought "Is this right or wrong," can never rise too often. No,—let them become as common as sunbeams. Let them be reiterated till a habit has been formed of seeing every thing in a moral point of view, till such questions rise *habitually* in the child's own mind, on every suitable occasion.

Most unfortunately, few parents are capable or willing to conduct such a discipline in their families.—The greater the necessity, then, that it should not be neglected by the teacher. And, as he also is too frequently but ill prepared, the more is the need that he should be furnished with some such aids as those I have so frequently alluded to.*

The proper time, then, for moral education would appear to be in the dawn of the intellect, commenced, if possible, by the parent, and continued by the teacher, till the child becomes a *conscientious being*, one whose conscience is fully awakened, one who habitually listens to and obeys its monitions.

Let it not be imagined here that the writer considers the conscience, un instructed, an infallible guide. The idea he would enforce is, that, with the *usual*

aids of religion, science, observation, and good example, the man whose conscience has thus been roused to activity, who has been in the habit of hearing and attending to its counsels from infancy, will prove a very different being from him who has been through life the mere slave of impulse, never accustomed to look within for guidance. Can this be seriously doubted? Surely not.

ACTION. It has been already observed, that nothing is more worthless than a mere *speculative* morality. Children must not be content to talk of the pleasures of love and kindness. They must be stimulated to carry out their ideas into action. And we may be assured, that after such lessons as have been mentioned, the slightest suggestion will set them to work. When the heart is softened, it seeks for relief in deeds. Let the teacher and parent, then, not confine the moral questions to the reading lessons, but apply them on every occasion to the passing events in the family, the school-room, or the play-ground.

In conclusion, a few words on the *influence of example* may not be inappropriate. It is a favorite theory with many, that moral education should rest principally on example. Such an influence is doubtless exceedingly valuable. The good conduct and amiable manners of parents or teachers will certainly not be altogether lost. But it is not sufficient. Children sympathise far more with persons of their own age than with adults. And, so long as the vast majority of youth remain ungovernable, self-willed, and perverse as now, the influence of example must, on the whole, be much more prejudicial than otherwise. It is evident, then, that at present we must not place much reliance on this principle. When schools are reformed, when children in general have become docile, amiable, and under self-control, then, but not till then, will it be safe to place dependence on the *influence of example*.

If these speculations are favorably received by the editors and readers of the Journal, this important subject may probably be resumed at a future period, and endeavors made to give it a still more practical character by examples.

DIAMOND.

For the School Journal.
American Dictionaries.
 No. IV.

Having thus, in former numbers, taken a rapid survey of Dr. Webster's Dictionaries, I now proceed to notice the works of other American lexicographers. The most prominent of these is Mr. Joseph E. Worcester. About twenty years ago, this gentleman tells us, he edited "Johnson's Dictionary, as improved by Todd, and abridged by Chalmers, with Walker's Pronouncing Dictionary combined." This work I have never seen. It must, however, have been of course exceedingly imperfect, when compared with the more complete works of the present day, and particularly so as combined with Walker's obsolete system of pronunciation. This led the way to Mr. Worcester's "Comprehensive Pronouncing and Explanatory Dictionary of the English Language," a work of about four or five hundred pages, 12mo., closely

* See No. for June, 1848, p. 18. There is one peculiarity in the school-books mentioned, which, though only aiding indirectly in moral education, is yet of too important a character to be altogether passed without notice. It is this:—The questions in all other school-books furnish exercises for the *memory* alone. They never cause the child to look within. The reasoning powers lie wholly inert. "Who did this?" "Who said that, and what was the reply?" Such are usual accompaniments to the reading lessons. Not so in the "Moral Instructor." Here the most important powers of the intellect are gently and gradually, but constantly and steadily exercised. Not one question can be answered without *thought*. "Is this right or wrong?" "Is it true or false?" "What sort of a boy or girl is this?" "Will such conduct render him happy or unhappy?" Now what will be the effect of such youthful training in after life? Will it form fit subjects for demagogues, quacks, or fanatics? Will they be apt to lean upon others for all their opinions; or will they be, what now is so seldom met with, *thinking beings*, persons who examine before they decide?

printed, with a new and very much improved system of notation for the orthoëpy. This was undoubtedly one of the most valuable works of the size that had then appeared. Before the publication of this book, however, Mr. Worcester was induced by Dr. Webster to undertake the labor of making the octavo abridgment of his great "American Dictionary of the English Language," a task which is believed to have given satisfaction to all parties.

While engaged in the preparation of his Comprehensive Dictionary, Mr. Worcester adopted the practice of recording all the English words he met with, used by respectable authors, and not found in Todd's edition of Johnson's Dictionary. This practice was continued with a view to provide the means of improving the "Comprehensive Dictionary." But the words which were not registered in any dictionary, were found, he says, to be more numerous than he anticipated, and the collection having accumulated beyond expectation, he at length formed the design of preparing a new and larger dictionary, which should contain as complete a vocabulary of the English language as he should be able to make.

Thus originated the large dictionary of Worcester, entitled, "A Universal and Critical Dictionary of the English Language, to which are added Walker's Key to the Pronunciation of Classical and Scripture Proper Names, much enlarged and improved; and a Pronouncing Vocabulary of Modern Geographical Names." It was published in 1846, and was followed, in the present year, by an enlarged edition of the "Comprehensive Dictionary." The former is about the size and price of the largest abridgment of Webster's Dictionary. The latter contains about 500 pages and is sold for ninety cents. Mr. Worcester also published an abridged edition of this work, which was entitled the "Elementary Dictionary," for the use of schools, but this has been wisely suffered to go out of print, small abridgments of this kind being any thing but satisfactory.

Perhaps no better idea can be formed of the value of these works, as to definitions, compared either with each other, or with those of Webster, than by quoting from Worcester the articles already given from the two larger editions of Webster, in your Journal for September last, page 65, viz. *latitude* and *lazy*.

OCTAVO. *LATITUDE*, *n.* [*latitudo*, *L.*] Breadth; width; in bodies of unequal dimensions, the shorter axis; in equal bodies, the line drawn from right to left; room; space; extent; laxity; undefined freedom.—(*Geog.*) The distance of a place from the equator, north or south, expressed in degrees of the earth's circumference.—(*Astron.*) The distance of a body from the ecliptic reckoned towards the poles of the ecliptic, either north or south.

DUODECIMO. *LATITUDE*, *n.* Breadth; width; space; extent; distance north or south from the equator.

OCTAVO. *LA'ZY*, *a.* [*lijzer*, *Dan.*; *losigh*, *D.*] Idle; sluggish; unwilling to work; indolent; slothful; inactive; tedious.

DUODECIMO. *LA'ZY*, *a.* Idle; sluggish; slothful; slow; tedious.

By a comparison of these definitions with those formerly given of the same words, it will be perceived that Worcester is by no means a servile copyist from Webster. Indeed he assures us, in his Preface to the larger work, that "he is not aware of having taken a single word, or the definition of a word from that work in the preparation of this; but, in relation to words of various or disputed pronunciation, Webster's authority is often cited in connexion with that of the English orthoëpists."

In the Journal for November, I quoted a few definitions from the two smaller editions of Webster, to show their deficiencies. In order that a fair estimate may be made of Worcester's work, it will be but right to quote the definitions of the same words from his smaller Dictionary, which occupies a station about midway in size and price between Webster's University and School Dictionaries. By a comparison of the three, every one will be able to judge for himself which is the most valuable book, which the most suitable either for school or family purposes.

VIGIL, *n.* a watch; devotion; a fast.

SPIRIT, *n.* an intelligent being, imperceptible to the corporeal senses; an immaterial substance; the soul; a ghost:—temper; disposition; excitement; ardor; vigor: life:—strong liquor.

STREAMER, *n.* an ensign; a flag; a pennon.

VISION, *n.* the act of seeing; the faculty of seeing; sight:—a supernatural appearance; a spectre; phantom; dream.

In modern dictionaries, pronunciation forms a prominent and important department. Here Worcester and Webster have followed different courses. Both use marks for the consonants that are sufficiently significant. But, in regard to the vowels, while Worcester marks every letter in a manner that cannot be mistaken, Webster, on the other hand, relying on a system of rules laid down in the fore part of his book, seldom distinguishes, in the Vocabulary, any vowel but that in the accented syllable. This arrangement of his notation, I fear, has had much influence in producing the tame, monotonous manner of reading and speaking so prevalent in the schools and even pulpits of New England, or at least has done little or nothing to prevent it. I allude to the practice of giving the long or alphabetic sound to vowels in unaccented syllables, by which the accent is almost entirely destroyed. For neither the long nor the short sound, more especially the former, can be given to vowels, without considerable stress of voice, thus neutralizing the accent, by equalizing the stress on the different syllables. Nothing contributes more to heavy reading than this. Take, for example, the following words: about, abundant, depend, direct, Laura, mica, polite, &c., in which the alphabetic or long sound is given to the letters in italics, thus, besides the wrong sound, enfeebling or destroying the force in the accented syllable. Similar remarks may be applied to words beginning with *con*, *dis*, *in*, and other prefixes, such as contempt, contingency, contrive, intrigue, intention, disburse, disclose, &c., in which the short, distinct sound is given, in place of the ob-

acure or faint one, thus producing precisely the same pernicious effect on the accent noticed above.

Let me not be misunderstood here. I am far from attributing any part of this vicious pronunciation to Dr. Webster. If his rules were followed, most of the errors mentioned above would be avoided. For instance, in his rules, he says, "When an unaccented syllable ends in a vowel other than *e* mute, this vowel has an obscure or faint sound, unless otherwise marked." All the errors in the first example would have been avoided by an attention to this remark.—But what I object to is, the leaving to the application of a mere rule in the prefatory matter the correction of an error, to which he must have known most of his readers were peculiarly prone, in place of marking the vowels, so as to show distinctly the pronunciation of each individual word, as Mr. Worcester has so successfully done:

This subject will be resumed in another number of the Journal. P.

For the School Journal.

I would propose, to those who are studying Grammar, a few words for analysis. SIGMA.

"The thing they can't but purpose they postpone." (See Young's Night Thoughts.)

What part of speech is *but* in the foregoing sentence? What is its bearing on any of the other words? We have the same construction in such examples as, "I can't but think that he will recover."

"John came, and even Jamea was disposed to come."

What part of speech is *even* in this sentence? What is its bearing on any of the other words?

"Not only George, but Charles also was present."

How should we dispose of *not only* in this sentence?

"When, therefore, the Lord knew that the Pharisees had heard," &c. (See John, iv. 1.)

How do we parse *therefore* in such examples as this? It is necessary to do something more with it than merely to give it a name.

"He had some recollection of his father's being a judge."

How are we to dispose of *father's*, *being*, and *judge*?

PLAIN STATEMENT AND FREQUENT REPETITION. In conversation not long since with a friend on the best modes of teaching, I asked what, after so long experience, he had found to be the shortest and surest method of imparting instruction in the school room. By "plain statement and frequent repetition," said he. The answer seemed to us very forcible. It contains the essence of all good teaching.

DOUBLE YOUR MONEY. By taking an interest in your schools and your children's proficiency, you can double the value of your school money and make one dollar worth two. Let children see that their parents feel a deep interest in their improvement, and they will be likely to feel the same. Talk with them—see if they learn thoroughly—encourage them, and always visit the school. Half a day spent for that purpose will be worth more than a five dollar bill to lengthen

out the school. Why not make the most of your money?

RECIPES FOR FINISHING A YOUNG LADY. Take the daughter of a person who has some money, but not much information, and if she be an only child so much the better for your purpose. Stuff her with plum cake and praise till she is nine; then teach her the horn-book, and let her practice for three or four years at such reading as may be selected for her by Mary, the maid of all work—the said Mary taking especial care that Miss is her confidant in all her little matters in the sweet-heating line. When she enters her thirteenth year, send her to Miss Diddlefidget's "Establishment" to be *finished*. Here she must read a little and spell some, but avoid every thing like grammar as a vulgarity and a plague. Put her up to *woolly-woo*, *parley-woo* a little, and she is *Frenchified*. Strum her up six octaves and a half of the *pianar*, and down again, and make her look charming at the harp, and she is *mus-ked*. Inform her that Tamerlane succeeded Charles the Twelfth as Emperor of China, and that Julius Cesar defeated Oliver Cromwell on the banks of the Macquarrie river, in Nova Zembla, and she is completely *historified*. Tell her that Chimborazo is a great salt lake in Arabia, and the Po is a burning mountain in Arabia Felix, and let her give a whirl or two to the globe, and point out the longitude of the Arctic Pole, and the latitude of the equator, and she is *geographified*. Make her waltz for three hours in a week with a French valet out of place, and she is *attitudinized*. The other accomplishments may be obtained for money, without any exertion on her part. So much for "*hedication*."

A school ought to be a noble asylum, to which children will come, and in which they will remain with pleasure; to which their parents will send them with good will.—Cousin.

QUESTION FOR THE CURIOUS. "If a man leaves London on Monday at noon, and travel west with the apparent speed of the sun, so as to make the circuit of the earth in 24 hours, when and where would the inhabitants first tell him it was Tuesday noon?"

The above query, taken from a Philadelphia weekly paper, simple as it may appear at first glance, will puzzle and afford much amusement to any of your readers who will take the trouble of giving it a little thought, and if they give it a little thought, my word for it they will have to give it a good deal before they arrive at any satisfactory solution.—Patriot.

The Hon. Horace Mann, in alluding to ill ventilated school-houses, remarks as follows:—

"To put children on a short allowance of fresh air, is as foolish as it would have been for Noah, during the Deluge, to have put his family on a short allowance of water. Since God has poured out an atmosphere fifty miles deep, it is enough to make a miser weep to see our children stunted in breath."

Advice, like snow, the softer it falls, the longer it dwells upon, and the deeper it sinks into the mind.

THE AGRICULTURIST.

Agricultural Societies.

A leading object of Agricultural Societies is to cherish an interest in agricultural pursuits. Here and there we find an individual of so much natural energy and fire as to *keep himself* warm and active. He needs no external excitements in order that his mind may be in an inquiring posture. It is in his very nature to be devising new ways and means and making improvements. He can work alone; and he naturally communicates something of his own spirit among his neighbors. He is alone as good as an agricultural society. And so it is sometimes with a small neighborhood of farmers. They are of such character, and pursue their business in such a spirit, as to keep alive the flame, and make their home a bright spot for the eye of the admiring stranger to rest upon.

Most men, however, of all professions and employments, are sadly deficient in this respect. They are lazy; and more averse to mental than to bodily exertion. To think is the hardest and most repulsive of all work to them. To do their work with the least thought, one would be tempted to say, is their ideal of excellence. They task the body and let the mind take its ease.

Now the essential characteristic of all industrial improvement consists in reversing this state of things—in throwing more of the labor upon the mind that the body may be relieved of its weary task-work. Instead of setting ten thousand women to work through the long day at their little wheels, mind contrives to attain the same end by turning water and wood and iron into busy fingers. Instead of leaving it for half-a-dozen men to gather the hay by hand rakes, mind contrives to make the horse do it. Mind contrives, where it can be done, to drive the loaded team into the second story of a barn, that the body may have to throw the hay down instead of up. And so through the whole catalogue of human employments. The ignorant and thoughtless—the mere creatures of imitation and habit, do their work by the hardest; the poor body is made a drudge, and the mind sleeps. The spirit of improvement would wake up that mind, and make it do its proper work.

But, as before remarked, in order to this awakening there is in most cases needed an impulse from without. There is not within, native fire and energy enough; or if native, it has been repressed and clogged and put in fetters of iron by long habit, stupid example, and incessant bodily toil. Where there is genius—a sort of volcano that will burst out at any rate, a lone man may get along in the path of improvement. In such a case, we might be tempted to say that the farmer's family would be the best of agricultural societies, because there the members know each other and each other's business thoroughly, are together every day, can all have their eye upon every improvement going on, and contribute each his thought towards making every work perfect. We might say this, but for the fact that such improving

individuals, as a matter of fact, and as if by impulse of their more active nature, are found among the first to fly to a larger organization, and to seek the means of improvement from a wider sphere of observation among men.

So, also, where there is a live spirit of improvement in a school district or a town,—a spirit that will act and keep things stirring, there are great advantages in small associations of farmers. But for this there are needed materials too rare among us,—the high intelligence, the active spirit of improvement, the lively sympathy. These will not appear and combine at your bidding in every New-England town; not yet, we give to say, in one town in a hundred. In most towns, were the farmers to unite in a town Agricultural Club, their meetings, their discussions, their exhibitions would not be imposing enough to stir the community, and the members would soon fall off for want of interest.

Such considerations as these, impressed upon us by what we know of small associations for other purposes, would lead us to the conclusion that, to accomplish the purpose of awakening an interest, of commanding attention, of moving the general mind of our agricultural population, we must have associations not less extensive than our County Societies.—A movement, an association, a meeting, an exhibition, agitates the public mind in proportion to its greatness. There are many active agricultural societies in New-York; but none of them excite such general interest or so strongly move so many minds, as the State Society.

Our educational system is an illustration in point. So far as the cherishing of a spirit of educational improvement is concerned, the centres of light and heat, the originators of motion, are not found in the school districts. They come from organizations in which a whole state, a whole nation, has an interest. The most intense spirit of improvement is found in the seminaries of learning that call together select spirits from a whole community. The impulse goes out from the College, through the Academy, to the district school, the family, and the lisping child. True, the members of a family, the inhabitants of a school district, or of a town, have facilities for acting together; and were the perennial fountain of improvement opened among them in all cases, the prospect would be hopeful. But alas! more generally that fountain is yet to be opened; and the problem is, to make its waters flow and to feed its springs. For this, all experience the world over shows that we must look to a higher source. Science diffuses itself from the discoveries of genius, till it comes to guide the hand of the humblest laborer; and with the science, spreads, though in feeble and still feeble waves, something of the mental impulse in which that science originated.

We have not space here to pursue the subject.—We are confident that, on thorough study of the subject, sound reasoning would lead us, not less conclusively than long experience in this and other countries, to the conviction, that large agricultural associations, such as county and state societies, deserve

our confidence and hearty support as a means of agricultural improvement. What we have to do is to study their capabilities, and perfect their adaptation to the state of things among us.

The readers of the "Vermont State Agriculturist" published at Burlington, will understand that these remarks are made with reference to the views put forth by the Editor of that Journal. We do not attempt a direct answer to his argument. If we had done so, it might have pleased him better, for we know he only wishes that the subject may be so discussed as to lead to the best practical results. Our object is merely to contribute our mite, as our limits allow, towards a proper understanding of the matter; and for the same purpose we may have more to say at another time.

For the Vermont Agriculturist.

Wheat to Sell.

If you would have wheat to sell, much pains should be taken in the preparation of seed wheat before sowing. And while the writer feels much obliged to others for their suggestions about the preparation of the ground, and so forth, farmers will please accept a few directions from one who has been successful in raising good wheat in a neighborhood where weevils and smut have heretofore troubled us much.

About two weeks before you wish to sow your wheat, take some old irons and throw them into a tub, then pour on some strong brine, leaving the irons partly exposed to the air, occasionally turning them over, so that the rust will accumulate as fast as possible. Save this liquid until you soak your wheat for sowing.

After washing the seed in the usual way, pour off the water from the wheat, and then pour in your brine. Also take, for one bushel of wheat, one pint of good soap, and make a suds with about four quarts of water, and pour that in also. Let the wheat stand there before sowing some six or seven hours, occasionally stirring it. After sowing, it should be harrowed in as soon as convenient.

Follow these directions, and if your ground is properly prepared, with a blessing, you may have wheat to sell.

SIGMA.

Topsham, Nov. 30, 1848.

Advances in Agricultural Knowledge.

Do we make any progress in the art of farming, or are we stationary? This is an important inquiry for farmers, as all are directly interested in its solution. Do we grow more grain or hay on the same quantity of land than we did fifty years ago? Do we raise better stock, or can we perform the labor on a farm with more facility and ease than we did in former years?

We propose, now that the shows are past, to look into this matter a little, and see how the land lies. At the Cattle Show in Bridgewater, Plymouth County, the President of the Society, Rev. Mr. Allen, remarked, that within thirty years past such improvement has been made in Plymouth County that

twice as much hay per acre is now grown as formerly. This may be so on the average, though we are inclined to think that some of our best farmers grew about as much corn to an acre as they now do. But the general average is now higher through the State than it was formerly.

The fact is, we are limited when we attempt to grow excessive crops of corn. We must not expect to gather in exact proportion to the richness of the soil, for corn must have room to stand and admit the air and light. It is folly to huddle the stalks so close together that they will not produce ears—and though we cannot increase this rich crop at will, we grow it at less than we did fifty years ago.

But when we look to our grass and our hay we find most material improvement. The rotation system has had a wonderful effect to increase our hay harvest. We can well remember when it was generally customary in Middlesex County to set some fields apart for hay, others for grain, and others for pasturing. No one thought of laying down his grain land for grass, and ploughing up his grass land for corn and grain.

Yet now this is a most common operation, and by this alone the amount of good hay is immensely increased. But the product is still more increased by the improvements made upon low lands, bogs, and peat meadows. Farmers were formerly skittish about meddling with any low ground except to cut the coarse grass that naturally grows there. They were quite backward too in meddling with their cold low grounds that would well bear up a team, but were not good to bear corn and rye.

They were ignorant of the process which is now so common, of ploughing these cold low lands and sowing them at once to grass in the month of August. In this way thousands of tons of good hay are now produced in this State on land that formerly bore but little for want of the proper mode of culture.—Most farmers, till within a very few years, seemed afraid to sow grass seed along on the furrow newly turned—the green sward furrow. Some indeed had ventured to sow grass seed in company with winter rye, but when no manure was applied, no great harvest could be expected, and as these low grounds were not adapted to rye, the process was rather discouraging.

At present we see extensive flat and cold grounds covered with a beautiful growth of new grass that is advancing to maturity, and will yield from one to two tons per acre for a number of years in succession.—And this on land that is wholly unsuited to grain.—Such fields were not seen, as our readers well know, till the editor of this paper commenced writing on this subject about ten years ago.

Another mode of increasing the harvest of merchantable hay has made regular advances for thirty years past. That is, the conversion of bog meadows into English mowing. These meadows, till within a few years, were considered the most worthless of any lands on our farms, but now they are considered the best lands for hay that we have in the State. Peaty bogs and low grounds that bore a very poor kind of

meadow grass are now brought to bear sweet hay by training, paring, and burning; or by covering up the coarse growth by earth from the high adjoining hills. —*Ploughman.*

Benefit of Example.

The influence of one good farmer among his immediate neighbors, is greater than is generally supposed. I am led to think so from what came under my observation when a boy. My father, (whom I always set down as a good farmer,) purchased a farm in a neighborhood where the farms had descended from father to son, and the *modus operandi* was among the "aperturances" bequeathed. Each innovation of my father on old customs, was hailed with a sneer and a—"guess he will get sick of that." The muck was "cold stuff," the ashes would "kill the corn," the plaster "ruin the land," the cultivator was "not half so good as the plow," the spring-tooth rake "spoiled the hay, and would be torn all to pieces before haying was over." When asked to take an agricultural paper, the reply was,— "We know more farming than we can do now." But they were men who looked to the interest of their pockets, and could not fail to see that my father's crops were ahead of theirs, with less advantages for manure, and that he was ahead of them in his work with less help. The consequence was, one after another might be seen starting the team for the muck swamp, but stealthily, as a dog bent on mischief. The cultivator, the horse rake, &c., were purchased and brought home in the night, at first, that the neighbors might not see them. One or more agricultural papers are now taken in each family.— They have found that although they knew before, "more farming than they could do," much of it may be unlearned, and what needs to be done, may be done quicker and better by adopting the improvements of the day.—*O. W. Edson, Chester, Vt., Dec. 8, 1848.*

Revivification of Potash.

There is nothing novel in the observation of Prof. Gelhen, that "Potash again forms spontaneously in drawn ashes;" nor is Dr. Dana's estimate of the contents of leached ashes, "in which are found phosphoric acid, lime, magnesia, oxide of iron, manganese, &c.; substances all useful in the growth of plants," at all antagonistic to this principle. It is well known that the natron or saltpetre beds of the East Indies, which consist of banks of earth that have been turned over and lixiviated for ages, are found, after a given period, to have become again rich as ever in alkaline productions, which must have formed *spontaneously*; the careful washing, under the superintendence of scientific men and Professors, sent for the express purpose from England, scarcely warranting the supposition that there is "one pound," or even one ounce of alkali left in each bushel of the earth, after the operation of leaching has been gone through. In the revolutionary war between England and France, when the latter power was deprived of the means of obtaining supplies of saltpetre for the fabrication of gunpowder, the officers of the government were ac-

customed to visit the cellars of houses and take samples of the plastering, removed from the walls for the purpose, which were sent to the Chemical Laboratories for analysis; and when found to produce on lixiviation a given quantity of alkali—saltpetre—persons were sent to scrape the walls, without consent of their owners, replastering them in return. And although it was not always that the yield of alkali was sufficient to warrant the cost of lixiviation, it was only to wait for a time, and on further trial it was found to have "formed spontaneously," and to have reached the desired point of alkaline product, when they were scraped, *sans ceremonie*, and the contents sent to the refineries, were soon changed to that villainous compound article, Gunpowder; nor was there any difficulty in procuring sufficient for their murderous purposes, by those and other domestic means of manufacture.

R. I.

—*Boston Cultivator.*

Charcoal in Fattening Hogs.

I resided a few years ago on a farm, in Henry co., Tennessee, a few miles north of Paris, the county town; and being part of the time somewhat engaged in farming operations, had occasion frequently to notice much that pertained to them. Among other "important" things, was that of the annual hog-fattening, in the autumn or fall. For convenience to a constant supply of running water, a pen was made—embracing a place on which several pits for charcoal, or "coal-kilns," as they are familiarly called, had been burnt. Much of the remains of the coal, consisting of particles too fine to be gathered up, had consequently been left. The rapidity with which the hogs fattened, and the less amount of corn required than usual, attracted my attention. I found that it proceeded from the charcoal, which they ate with avidity. This reminded me of the accounts I had seen, several years preceding, of the fattening of fowls, as turkeys, geese, &c., on charcoal, without scarcely any thing else. These, I recollect, were kept in *dark* places. But what effect the absence of light would have on hogs, in fattening, I cannot tell. I have since given charcoal to fattening hogs with great advantage, and heard of others doing the same. This is important to pork raisers, who will find it to their advantage to burn a little pit or kiln, every year for the purpose; or where they have not wood to spare, or cannot do it conveniently, to purchase charcoal for this purpose. This will also prevent the hogs from "eating dirt," which they will generally do, if they cannot get something of this sort. But "a hint to the wise is sufficient."—*Great West.*

MORTALITY AMONG SHEEP IN AUSTRALIA. A dreadful epidemic is now prevailing in the pastoral districts of Australia. The sheep are dying by thousands and tens of thousands. Whole flocks are carried off in a single night. One man, writing from that country, states that in a single spot he found himself surrounded by 36,000 dead sheep. It is remarkable that the small pox is now committing great ravages among the sheep in England.

From a Premium Essay by J. W. Proctor, Esq.

Cultivation of Onions.

The culture of onions has increased so much, within a few years, in this vicinity, that it has become one of the staple products of the county [Essex Co., Mass.] In the town of Danvers, more money is realized by the sale of the onion, than in any other product of the soil. Products of so much value, and commanding so much attention, are fit subjects of inquiry; and if there be any facts relating to their cultivation not generally known, it may be useful to have them brought forward.

In making these inquiries, our attention has been directed almost entirely to practical cultivators, without reference to scientific treatises. Our intention being to tell their story, as near as possible, in their own way.

We shall treat of the subject in the following order:

1. The preparation of the land.
2. The manure best adapted to promote the growth.
3. The raising and planting of the seed.
4. The care necessary to be applied while growing.
5. The blights and injuries to which the crop may be liable.
6. The time and manner of harvesting.

1. As to the preparation of the land.

Differing from most other crops, the onion grows well on the same land for an indefinite number of years. Instances of continued appropriation of the same pieces of land to the growing of onions, for *ten, fifteen, twenty*, and even *thirty years*, have come to our knowledge. It is the opinion of many that the crop is better after the land has been thus used a few years than at first.

Rarely, if ever, have we known the onion sowed upon the turf when first turned over. It is usual to subdue and pulverize the soil, by the cultivation of corn or some other crop. Not unfrequently the first year with corn, the second with carrots, and afterwards with onions. It is important, before the seed is sown, that the surface be mellow, finely pulverized, and clear of stones or other impediments, to the free and unobstructed use of the machine for this purpose. The finer and more uniformly mellow the surface is made, the better. Shallow plowing, say from four to six inches deep, is usually practiced. Once plowing only in the spring, and frequent harrowings, are practiced. Before the plowing, the dressing is usually spread upon the surface of the field, so as to be covered or intermixed in the furrow. The mingling and subdivision of it, is effected by the use of the harrow.

Whether it would not be advantageous, occasionally to stir the land to the full depth of the soil, is a point on which there is a difference of opinion; most of the cultivators inclining to the use of shallow plowing only. There are some facts tending to show that occasional deep-stirring of the soil does no harm to the onion crop, but on the contrary is decidedly beneficial. As for instance, onions do better where carrots have grown the year preceding, than after any

other crop. The carrot necessarily starts the soil to the depth of ten or twelve inches. Possibly there may be some other influence upon the soil from the plant itself. Our belief is, that the thorough and deep stirring of it, is the principal preparatory benefit.

2. The manure best adapted to promote the growth.

Any strong manure, well rotted and finely subdivided will answer. But the general impression seems to be, that manure from stables, where the horses are freely fed with grain, is the best; and that it should be at least one year old, because it will not be sufficiently rotten in less time. All agree that the dressing for the land should be kept near the surface, well mixed, and as fine as possible.

Leached ashes are also a valuable manure in the cultivation of the onion; more so when *leached* than before. All kinds of ashes are advantageously applied on onion land.

Compost manure, made of meadow mud and the droppings from the cattle, we have known to be advantageously applied on onion fields; but we have many doubts as to this being the best application of this kind of manure. A more lively and quickly operating manure is better for the onion; one that will give them an early start, and advance them as fast as possible, in the first part of the season. The utmost vigilance and activity is used by our cultivators in getting their land ready, at an early period of the season, for the reception of the seed. It is the first field labor of the spring. The use of compost manure will depend much upon the constituents of the soil with which it is mixed. If the soil be a sandy loam, with a porous subsoil, the compost will do tolerably well; but if it be a black soil, with a clayey subsoil, such as are most of the lands where onions are raised in this vicinity, stable manure, or mased-bed, or leached ashes, or a mixture of these, will be a better application. The quantity ordinarily applied annually is from four to five cords to the acre. Whatever is applied should be generously applied. It will be vain to expect full crops of onions without full manuring. When the manure is collected, it is benefited much by a free application of *elbow grease* in its preparation. The cultivator of the onion must work early and late and in good earnest. Nothing short of forcible and persevering labor will answer. No one who is afraid of *soiling his hands, or the knees of his trousers*, will do to engage in this business. Close work, at the proper time, is the only sure guarantee of a good crop.

3. The raising and planting of the seed.

In relation to the Onion, as well as all other vegetables, much care is necessary in the selection of the plants for seed, and the cultivation of the seed. By the application of this care, the character of the article raised may be modified almost at pleasure. Until within a few years the *flat onion*, hollow about the stem, has been preferred. The thinner the handsomer. But it is now understood, that the *round, thick, plump onion*, is preferable in many respects. It is found to have a decided preference in the market, commanding *ten per cent.* more in price. By select-

ing those of most desirable form, which ripen the earliest, and carefully setting them for seed, where they will not be exposed to the impregnation of the baser sorts, the quality has been materially changed and improved. These peculiarities in the onion were first noticed in this vicinity by Mr. Daniel Buxton.—He was careful to select in the field before the crop was gathered, such onions as he preferred, and to preserve them for seed.

By so doing, the seed which he raised soon acquired a character superior to any other. Many of those who had been accustomed to raise their own seed in the ordinary way, laid it aside, and purchased seed raised by Mr. Buxton, and found their account in so doing. There are three varieties of the onion raised in this vicinity—the *Silver-skin*, the *Red*, and the *White* onion. The *Silver-skin* is the predominant species, and more cultivated than all others. The *Red* is preferred by some—sells better in some foreign markets, but does not yield so abundantly. The *White* onion yields as well as either of the others, is milder and preferable for immediate use; it will not keep as well, and is not fit for exportation; which is the principle use made of our onions.

The common drill machine is used for the distribution of the seed. This admits of regulation, so as to scatter it more or less thick; and in this there is room for the application of sound judgment. The usual quantity sown is about three pounds to an acre. As a general rule, we should say, one pound of good seed was the proper quantity for a quarter of an acre of land of good quality well prepared. It is desirable to have the seed planted as thick as they will grow fairly, both to secure a full crop, and prevent the onion growing too large. Onions from one to two inches in diameter being preferred to those of a larger size. The skilful cultivator carefully looks after all these incidents relating to his crop.

4. The care necessary to be applied while growing.

Much of the success of the crop depends on this care. At first the plant is extremely tender, and requires to be handled with much caution. Any derangement of the fibres or roots of the young plant, is attended with prejudicial consequences. Much attention is necessary to prevent weeds gaining the ascendancy; and in eradicating the weeds. Want of due care in this is often the cause of failure of a crop. We have known, the present season, a highly promising crop to be injured *twenty per cent.* at least, by permitting the weeds to remain unnoticed *one week too long*. This is especially true when there has been a want of due care in preventing the scattering of the seeds of the weeds on the land in the years preceding. Care should be taken, both that no weeds shall ripen their seed upon the land, and that no weeds shall be found in the manure. In this respect, warm stable manure, muscled, and ashes, have a decided superiority over all other manures. Perhaps there is no plant more liable to be injured by weeds than the onion. The fibres it sends out are very numerous, minute, and tender; any fracture of any of these necessarily impairs the perfection of the plant. When

the land is in the proper condition, two careful weeding are all that may be necessary. The rest of the stirring of the ground that may be required to promote the growth, can be done with the *Onion Hoe*,—an instrument specially constructed for the purpose, moving on wheels, and adapted to the width of the rows. It is calculated to pass between the rows of onions—being either drawn or pushed. The wheels cover a space of about one foot in width, and the length of the cutting blade is also about a foot. The length of the handle is about five and a half feet.—The usual distance between the rows is fourteen inches, and as the hoe takes a breadth of twelve inches, it cuts over all the ground, excepting a strip of two inches along each row. The cost of the hoe varies from \$1.25 to \$1.50. It was invented by Mr. Joseph Bushby, of Danvers, an intelligent and successful cultivator of garden vegetables, about 25 years since; and was used by himself and neighbors only for about ten years. It has now come into general use, and saves much of *back-aching labor*. The distance between the rows can be varied according to the quality and condition of the soil. Keeping the ground well stirred, loose, and free of weeds, greatly facilitates the bottoming of the onion. There is no plant that will better reward diligent care in the cultivation. The entire difference between a bountiful crop and no crop at all, often depends on this. The old maxim, "a stitch in time saves nine," applies with great force in raising onions.

6. The time and manner of harvesting.

When the tops begin to wither and fall, then it is usual to start the onions from their bed, and throw them together in rows—say eight or ten growing rows into one. After they have lain thus about one week, they are stirred and turned with a rake, and in about one week more, when the ground is dry, and the weather fair, they are gathered up by cart loads, and taken to the barn. Here they are sorted and cleared of refuse leaves, and then they are in a condition to be *bunched* or *barreled*.

It should be remarked, that a large part of the labor of *weeding, gathering, and sorting* the onion, can be performed by children from ten to sixteen years of age. Boys of this age, when properly instructed, will do about as much as men. They are more nimble, and can come at the work with greater facility. The sorting of the onion is frequently done by girls as well as boys. From three to five dollars a week, at one cent a basket, are usually earned by them during the period of harvesting—which includes the months of September and October. After the crop is taken off, if the surface is sloping, it is useful to plow furrows about one rod apart, to keep the surface from washing. Unless this is done, all the herbage being gone, much of the soil will be likely to be misplaced, by the melting of snows and running of water in the spring.

The inquiry arises, whether the growth of the onion is limited to soils of particular character, or whether it can be cultivated upon any good soil, with proper attention. We know that there is a popular impression, that there are but few places in which the onion can be cultivated advantageously. So far as

our own observation has extended, this impression is in a great measure erroneous. Like every other plant, the onion grows best on very good soils, in very good condition. But we have known very fair crops, on plain, light land, after the same was well saturated with *manure, muscle-bed, and ashes*. A good substratum must be laid before a good crop can be expected; and this being done, a crop may be expected on almost any soil that will support other vegetables.

If we were asked, what course is best to be pursued with land, on which onions have never been raised, to bring it into a condition for a successful cultivation of the crop, we should say—begin by plowing to the full depth of the nutritive soil, and during the first and second years, thoroughly subdue and mellow the soil by the cultivation of crops of corn and carrots, with liberal dressings of manure; then thoroughly incorporate with the soil a dressing of strong manure and muscle-bed, just covering this dressing; then harrow the surface thoroughly, and clear it of all roots, weeds, or other obstructions; then apply a coating of lively, well rotted manure to the surface, and bush harrow it; and then it will be in a condition to receive the seed, which is to be inserted as soon as the opening of the spring will admit of its being done.

We are aware that we make the raising of the onion dependent upon severe labor and vigilant attention. We know that it cannot be successfully done without these. But it is not labor lost. No cultivation, within our observation, better repays for the labor and incidental expenses. We have known, the present season, acres that have yielded their owners a net income of more than *three hundred dollars*; and we know that a man with two boys can well attend to half a dozen acres of such cultivation. Surely, when as at present, there is no limit to the demand for the article, and a ready cash market, those who have acres and are willing to labor, need not be in want of a fair compensation for their labor.

As samples of the present years' product in the town of Danvers, we state the following that have come under our notice:

Names.	Acres.	Product.
John Peaslee,	3	1,980 bushels.
Daniel Osborn & Son,	1½	870 "
James P. King,	1½	660 "
Aaron C. Proctor,	1½	600 "
E. & D. Buxton,	6½	2,750 "
Henry Bushby,	4	2,000 "
Joseph Bushby,	3	1,500 "

Yielding an average of more than 500 bushels to the acre.

INFLUENCE OF NIGHT TEMPERATURE ON PLANTS. Every gardener who pretends to an acquaintance with his profession is not aware of the prejudicial effects of *high night temperature*. We have repeatedly pressed the subject on his attention; we have shown that in countries, called hot, the thermometer often falls low during the night, and that to the vine in particular, night cold is indispensable and always provided by nature where grapes are finest. The well

known formation of ice near Calcutta, although brought about by slightly artificial means, is in itself a beacon to guide the gardener who reflects. In short, the kind of periodical rest which a low nocturnal temperature secures to plants is undoubtedly as necessary to them as sleep to animals; it may be broken for a short time with impunity, but it must be provided eventually, and the greater the regularity of it the better the health of the individual.—*English Paper.*

ADVICE IN POULTRY KEEPING. The principles upon which I rely for success in keeping hens, are, 1st, to have two breeds—a few to hatch and rear the chickens, and twice the number of overlasting layers as eggs are more profitable than chickens; 2d, to get a hatch as early as possible in spring, and to keep them well; these never cast their feathers like the old birds, and if they begin to lay in autumn, lay more or less all winter; 3rd, never to keep old fowls (none but favorite fowls ought to be kept more than two years); old birds lay larger eggs than pullets, but not nearly so many; 4th, to give them the best barley I could get, and as much as they could pick up once a day, in summer and twice in winter; they are not only more profitable, well kept, but the eggs are better. The two breeds I like best are the spotted Dorkings for sitting, and the pheasant breed for laying.—*Agricultural Gazette.*

TRANSPORTING CATTLE. The American Railroad Journal calls attention to some interesting railroad statistics in a late British periodical. It is there stated that the saving on the cattle, sheep and swine, in 1846, by transporting them on railways instead of driving them as formerly, was 41,800,000 pounds! and that the feed saved by the same change, was 48,000,000 pounds—which alone would sustain a population of over 50,000 people.

COTTON FOR SHOES. The London correspondent of the New York Commercial Advertiser says:

There is a new patented material for boots and shoes, called the Pannas corium, or leather cloth, invented by a person named Hall, which has met with a great share of patronage, from the Royal family down. The material is cotton, but has the gloss and general appearance of leather, and receives a polish from ordinary blacking and in the same way. It is used only for the upper part of the boot or shoe, the sole being leather. It is said to be as durable as leather, never cracks or splits and possesses the advantage of not drawing the foot—a great desideratum for persons with tender feet. They yield to the action of the foot without the slightest pressure. I speak from experience, having used them in my family.

Some of the ordinary expressions of the Chinese are sarcastic enough. A blustering, harmless fellow they call a "paper tiger." When a man values himself overmuch, they compare to "a rat falling into a scale and weighing itself." A spendthrift they compare to a rocket, which goes off at once.

TO KEEP GARDEN ALLEYS AND PAVED PLACES CLEAR OF WEEDS. Boil sixty quarts of water in an iron kettle, stir in fifteen pounds of lime, and from two to three pounds of sulphur—stir the mixture while it boils. Sprinkle the alleys and pavements with water having half this mixture added to it. The ground will be purged for many years of all vegetation.—*French paper.*

If this generation does its duty, the cause of constitutional freedom is safe. If we fail, not only do we defraud our children of the inheritance which we received from our fathers, but we blast the hopes of the friends of liberty throughout our continent, throughout Europe, throughout the world, to the end of time.—*Edward Everett.*

To such perfection is agriculture carried in Flanders, that 2½ acres are considered ample for the support of a man and wife and three children.

Recent experiments prove that if fish get beyond a certain depth in the sea, they die from the pressure of the water, which they cannot support beyond a certain amount.

Good nature is the very air of a good mind, the sign of a large and generous soul, and the peculiar soil, in which virtue prospers.

The end of learning is to know God, and out of that knowledge to love Him, and to imitate Him, as we may the nearest, by possessing ourselves of true virtue.—*Milton.*

Men of the noblest dispositions think themselves happiest when others share with them in their happiness.—*Taylor.*

The Markets.

BRIGHTON MARKET—THURSDAY, Dec. 28.

At Market 510 Beef Cattle, 270 Stores, 2450 Sheep and 130 Swine.

Prices.—Beef Cattle.—We quote to correspond with last week—Extra 6 25 a 6 50; first quality, 5 75 a \$6; second, 5 25 a 5 75; third, 4 75 a 5 25.

Working Oxen.—Sales at 70, 88, and \$125.

Cows and Calves.—Sales at 24, 27, and \$33.

Sheep.—Small lots at 1 02, 1 92, 1 81, 2 33, and 2 60.

Swine.—Two small lots to peddle at 4½c. At retail from 4½ to 6c.

Statement of Brighton Market for 1848.

40,784 Beef Cattle,	Sales estimated at	\$1,590,576
20,553 Stores,	" " "	493,272
146,755 Sheep,	" " "	261,159
87,690 Swine,	" " "	482,295
		\$2,830,302

1847.

43,425 Beef Cattle,	} Sales estimated at	\$2,719,462
20,738 Stores,		
133,550 Sheep,		
62,015 Swine,		

1846.

38,670 Beef Cattle,	} Sales estimated at	\$1,871,113
15,164 Stores,		
105,350 Sheep,		
44,940 Swine,		

43,910 Beef Cattle,	} Sales estimated at	\$1,893,648
13,275 Stores,		
107,960 Sheep,		
56,580 Swine,		

1845.

BOSTON, Dec. 30. WOOL. There is some inquiry for good white Smyrna washed, but there is very little here. Sales of 125 bales Syrian washed, and some Buenos Ayres, on terms not made public. The medium grades of American Fleece Wool are in demand, and the stocks light.

Prime Saxony Fleeces, washed, lb.	37	a	38
American full blood, "	33	a	35
do ¾ a ¾ blood, "	28	a	30
do ½ and com. "	23	a	25
Lambs, super, "	28	a	30
Do No. 1, "	24	a	26
Do No. 2, "	17	a	19
Do No. 3, "	10	a	12

FOREIGN.

Smyrna, washed, lb.	17	a	20
do unwashed, "	9	a	14
Bengasi unwashed, "	8	a	9
Buenos Ayres, unpicked, "	6	a	15
Crimea, "	6	a	9
Mexican, "	12	a	13
Barbary, "	25	a	—

[Daily Advertiser.

NEW YORK WOOL MARKET, Dec. 23. The Wool Market has been extremely languid since our last—the receipts have barely reached 50,000 lbs., and the sales to manufacturers foot up at about the same amount. The commencement of the Christmas holidays always has a marked effect upon sales, we shall therefore be without any movement of consequence during the next two weeks. Holders are anticipating an advance, predicated on the demand which must exist for California, but we think that fabrics must advance considerably before manufacturers can afford to pay higher for the raw material. In addition to this, the low prices of produce in Europe will necessarily tend to lessen the demand of the grain growing districts for manufactures. We would add that prices are stiff at our quotations.

Saxony Fleeco,	35	a	38
Merino,	30	a	35
do ¾ to full blood,	28	a	32
Common,	24	a	26
do Pulled, No. 1,	21	a	24
do Pulled super,	20	a	28
Lambs,	24	a	26
do Country Pulled,	24	a	26
do do super,	28	a	30
do do No. 2,	12	a	15

[Dry Goods Reporter.

FANEUIL HALL MARKET.

WHOLESALE.				Apples, barrel,			
Beef, fresh, lb.	7	a	12	do. dried, lb.	0	00	0
Mutton, 1st qual.	6	a	10	Beans, bush,	1	50	1
2d "	3	a	6	Peas, bushel,	0	00	0
Lamb,	4	a	8	Potatoes, barrel,			
Veal, lb.	5	a	7	New,	2	00	2
Pigs, roasting,	1	00	1 25	Common,	3	00	0
Chickens, lb.	10	a	12	SEED.—RETAIL.			
Turkeys,	10	a	12	Clover-North, lb.	10	a	12
Geese, mongrel,	1	25	1	Southern, "	8	a	9
Pigeons, dozen,	1	00	1	White Dutch, 00	25	a	25
Pork, per 100 lbs.	6	00	6	Lucerne, or French,	33		
Lard, best, pr. bbl.	7	75	8	Herdsgrass, bush,	3	25	3
Western, keg,	8	00	8	Red Top, bushel,			
Butter, lump, lb.	20	a	25	Northern,	1	25	0
do. firkin,	15	a	20	Southern,	65	a	84
Cheese, new milk, 7½	a	8		Orchard Grass, "	—	a	2
do. four meal,	5	a	6	Fowl Meadow,	2	50	0
Eggs, doz.	23	a	25				

EFFECTS OF MUD ON GRASS LANDS. Last season, Mr. David Choate of Essex, Massachusetts, sent us, says the Boston Cultivator, some heads of grass, showing the effects of mud on the crop. At that time no particulars were communicated, but since, Mr. Choate has given the following:—In the Fall, meadow-mud was hauled from low land, and laid in a heap on high dry land, that yielded a very light crop of grass. In a short time the heap was removed, leaving about an inch depth of the mud, in consequence of which a very stout crop of grass was produced the next season.—The heads of herds grass from the land thus manured by the mud are eight inches long, and of a large size. This shows the very powerful effects of mere mud, which abounds in nearly every section of the country. Almost every farmer has on his farm a mud mine, more valuable in contributing to the happiness of himself and others, than a mine of gold.

HOW TO MANAGE A KICKING HORSE. First make a stall or pen for your horse, in which he cannot turn round, and with slats, through which you can put your hand to rub him in the face, and all over, two or three times, raising his tail gently three or four times, then touch one of his fore legs, and say to him, "foot, foot," till he shows a willingness to raise his foot; raise his foot and put it down some three or four times, and then go all round until fear is removed. All you wish a horse to do, ought to be done three or four times, repeated two or three days in succession.

TO TEACH A HORSE TO LIE DOWN. First with some soft handkerchief or cloth tie up one fore leg; then with a stick, tap him on the other and say "kneel." Sometimes by rubbing him on the head, and patting him on the leg, you will induce him to lie down. It appears that all horses are inclined to obey when you teach them that you will not hurt them.—*Domestic Animals.*

Salt and Soot.

The power of soot as a top-dressing to either wheat or pasture land, is materially increased by the admixture of one-fourth of common salt. In the 4th volume page 270, of the Royal Agricultural Society's Journal, it is stated that 54 bushels of soot and 6 of salt produced larger crops of Altringham and white Belgian carrots than 23 tons of stable manure and 24 bushels of bones, at half the cost. It is best to hoe the land, where used as top-dressing for wheat, after the soot is spread, as that prevents the evaporation of the ammonia, which is the most essential part of the manure. To mix it with lime is most injurious, as that alkali causes the rapid dissipation of the ammonia.—Mr. Dimmery, of Stinchcombe farm, in Gloucestershire, uses nothing but soot as a manure for potato crops which he grows in drills, using soot at the rate of 25 bushels to the acre.

Great minds are charitable to their bitterest enemies, and can sympathise with the failing of their fellow creatures. It is only the narrow minded who make no allowance for the faults of others.

Domestic Economy.

MAKING SHEETS. Let the seam be upon the wrong side, and remember to rub it flat before the sheet is wet, and it will never roll up; hem one end of the sheet an inch wide, the other, one quarter of an inch. The former will always indicate the end to be placed at the head.

CARPETS. Very nice carpets require to be sewed with the darning stitch, we think it is called, but this is very laborious. Common ones are very well seamed together with the saddler's stitch. Sew with strong linen thread, double and hem on the bindings, sewing both sides at once, of course. A professed carpet maker says, some carpets do not last half their time because stretched too tight. They are too tight when the edges draw into scollops.

BEDS. A nice feather bed or mattress should have a covering made of some light, cheap fabric, or always be used with an extra bottom sheet well tucked around it. In all cases positively forbid them to be placed upon the carpet, floor, or any other dusty surface.—*Ohio Cultivator.*

TO BOIL CORNED BEEF. Put the Beef in water enough to cover it, and let it heat slowly, and boil slowly, and be careful to take off the grease. Many think it much improved by boiling potatoes, turnips, and cabbage with it. In this case, the vegetables must be peeled, and all the grease carefully skimmed as fast as it rises. Allow about twenty minutes of boiling for each pound of meat.

BOLOGNA SAUSAGES. Take equal portions of veal, pork, and ham, chop them fine, season with sweet herbs and pepper, put them in cases, boil them till tender, and then dry them.—*Miss Beecher.*

TO MAKE FURNITURE PASTE. Scrape four ounces of bees-wax into a pot or basin, then add as much spirits of turpentine as will moisten it through; at the same time powder one-quarter of an ounce of rosin, and add to it when it is dissolved to the consistency of paste; add as much Indian red as will bring it to a deep mahogany color; stir it up and it is fit for use.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by

BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy,	- - - -	50 cents.
5 copies, sent to one address,	- -	2 00
10 " " " " "	- -	3 00
16 " " " " "	- -	4 00

And any greater number at the rate last named, or 25 cents per copy.

☞ Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. II.

WINDSOR, VT., FEBRUARY, 1849.

No. 10.

THE SCHOOL JOURNAL.

For the School Journal.

Notes of Schools.

Dec. — Visited Mr. A's school, in town of —. House old and shabby, good stove and black-board. Teacher had taught several schools,—was confined to text book in recitation, had no faculty to interest the scholars. Scholars studied loud, whispered when they pleased, paid no regard to the teacher when he ordered them to be still and stop whispering. Classes stood very awkwardly and lazily,—some with their hands in their pockets, others with hands in their mouths, and none looking at the teacher, or manifesting any enthusiasm.

Dec. — Visited Mr. B's school, in town of —. Teacher, young, active, sprightly, energetic. Scholars mostly small, behaved well, minded quick, took their places on the floor in good order, "toed the mark," took places in spelling, looked at teacher with sparkling eyes and spelling remarkably well.

Dec. — Visited Mr. C's school, in town of —. House large, warm and convenient. School very still and studious. Several kinds of Geographies used. Two classes in Porter's Rhetorical Reader, when scholars would learn to read more in Third Reader, or even in the Spelling book, or Primer. Reading dull, monotonous, indistinct, and, though the reading books were read nearly half through the first two weeks of school, should think the exercise of reading did more harm than good. Writing books appeared well. The class in Arithmetic well. No interest in the class in Geography. Scholars easy yes and no to teacher.

Dec. — Visited Miss D's school. School small and backward. Teacher, young, inexperienced, not capable of interesting the scholars in their studies, asked the questions in the book and no others. Not a very poor school, or not a very good school.

Jan. — Visited Miss E's school in town of —. An experienced teacher, deliberate, self-possessed, decided, pleasant and cheerful. Scholars quite forward of their age, spoke loud and distinctly, read well, and recited well in Arithmetic, doing and explaining sums on the black-board. Class in Geography appeared well, recited well and correctly. No whispering or loud studying in school. Teacher said she had quite a battle to break up whispering, and loud study, and she evidently succeeded. In this school the scholars were respectful to the teacher and visit-

ors. Teacher capable of advancing the scholars more than four times as fast as the last mentioned teacher.

Jan. — Visited Mr. F's school, in town of —. House small and inconvenient. A good black-board, poor stove. Mr. F—a good scholar, sprightly and communicative, having many traits of a first-rate teacher, but deficient in government. School noisy and disorderly, some scholars learning very well, but most not interested in their studies, whispering, laughing, gazing about the school-room, and occasionally looking at their books. In recitation, teacher did not secure attention, sometimes one scholar and sometimes another answering a question, just as it happened; some of the class reciting none at all, and paying no attention to the answers of others. Scholars had the bad habit of spelling words without pronouncing the syllables. Large girls, bold, rude, busy in mimicking, winking, clandestine laughing, and when spoken to by the teacher, laughed him in the face, appearing more like baboons than young ladies.

Jan. — Visited Mr. G's school. Room not swept and very dirty. Teacher prompt, active, made the scholars mind by a word, look or motion, full of enthusiasm and imparting his enthusiasm to the school.—Classes in spelling all life and animation, each scholar watching with eager eyes for the teacher to pronounce the word, when the whole class would pronounce the word in concert, each then spelling his word in course; the teacher occasionally asking the meaning of a word, and the young pupils showing much skill in defining, (though they had no definition spelling books.) In hearing the younger classes the teacher was full of animation, manifested by the countenance, gestures, and tones of the voice, in opposition to the dull, monotonous, lifeless manner of too many teachers; the zeal of the scholars constantly rising with that of the teacher, as question after question was put, till it seemed occasionally to explode like electricity, from an over charged battery.

Jan. — Visited Mr. E's school in the town of —. House old, shabby, dirty, inconvenient. Large blackboard. A prompt, energetic teacher, takes great interest in school, secures order, though scholars appear as if they had not been under good discipline formerly, not behaving so well, or reciting so well as such bright scholars would do, if they had been under good instruction. A good school now, though, as the teacher remarked, not worth half so much as it would be in a good house.

Jan. — Visited Mr. I's school. An excellent teacher. School small, but very forward, and schol-

shewed by their good manners, and good recitations, that they had been well instructed in former schools, this district never having adopted the unwise policy of hiring cheap teachers because their school was small.

Nov. —. Visited Miss J's school of 35 scholars. House small, and uncomfortable; benches half cut up; *low seats so high* that small scholars sit with their feet dangling in the air. Teacher has the faculty of interesting scholars, not being confined to books, or the dull routine of mechanical questions and answers. Several outline maps in the school-room, which the teacher had drawn herself, and from which the scholars recited in concert with admirable zeal and propriety. In reading, classes did not *sing*, or pronounce the words like parrots, but read as naturally as they would talk.

Jan. —. Visited the school of Mr. K. in —. House neat, convenient, pleasant. An experienced, skillful teacher; quiet, unostentatious, but *decided*; excels in asking leading general questions on back lessons, and in so conducting the recitations as to develop the minds of the pupils, and give them an *insight* into their studies. Scholars recited well in concert on Mitchell's Outline Maps. School formerly *backward*, but now forward, as the district have taken great pains for two or three years past, to employ *only good teachers*, let the price be what it might.

The difference between a school that has been well taught, and one that has been ill-taught, is like the difference between a well cultivated, fruitful garden, and a garden full of weeds, briars and thistles, and it is easier to get the weeds and thistle roots out of a garden, than to get the bad habits out of scholars.

Jan. —. Visited the school of Miss L. A scene of noise, disorder, and confusion. Teacher continually interrupted by questions when hearing a recitation, scolding, threatening, telling the scholars to be stiller. In reciting, *any one* answers the questions, most of the class answering no questions themselves, and taking no notice of the answers of others, or of the remarks and corrections of the teacher. Scholars spell by naming the letters of the words, without pronouncing the syllables.

This school reminded me of machinery that runs with a great deal of friction, noise and clatter, but accomplishes little work. None of the Committee or parents had visited the school, and upon inquiry I learned the people thought they had a good school, as they had heard "*no complaint*." Perhaps if the next teacher here should undertake to secure order, and correct bad habits, the parents might hear some "*complaint*," and, either stop the school, or allow their children to stay at home because "the teacher had no faculty of pleasing the scholars."

Jan. —. Visited Mr. M's school. School room high, walls well whitewashed, benches old and uncomfortable. School still, studious, and respectful to teacher and visitors. No whispering at all, or loud study. Class in geography draw maps on blackboard, and understand what they have gone over. Class in spelling all stand erect, eye the teacher, who puts out the word and signifies by a look of his eye which scholar is to spell, thus securing the attention of the

whole class to each word. A pleasant, cheerful, profitable school. I inquired of the teacher how he succeeded in maintaining such order; he replied that it was some work *at first*, though he had not punished much, if any, having given the scholars to understand that if necessary to punish he should do it thoroughly, and when they saw he was in *earnest*, they complied with his rules cheerfully. Parents here interested in schools.

If parents were sensible of half the difference there is between good schools and poor ones, I am sure they would take more interest in improving the schools where their children are to be educated for life. The difference between a crop of potatoes yielding three hundred bushels of ripe healthy potatoes to the acre, and a crop of fifty or seventy-five bushels of potatoes, and most of these diseased, is not so great as the difference between a good school and a poor school.

JAMES TUFTS,

Superintendent of Common Schools.

Wardsboro, Jan., 1849.

For the School Journal.

Apathy of the People on the Subject of Education.

The fact that so little is found on the subject of education in the newspapers of our State, shows how little interest is felt on the subject by the people.— There is certainly no question that *ought* to have more interest for parents, than how they may best educate their children; and we should suppose, from the eagerness with which they read information on other subjects, that they would be at least *willing* if not eager to read information on that subject which most of all concerns them,—the education of their children. But how is the fact? Why, comparatively few parents are willing to pay twenty-five cents a year for the only paper in the State devoted to education, and the improvement of our common schools; while most of the County papers seldom allude to the great subject of education, either in their editorials or selections. Indeed, a stranger, on examining most of the papers circulated in our families, would not infer that the people in Vermont had any more interest in the subject of Common Schools than the people of Spain, or South America. The Editors of these papers are supposed to publish what will interest their readers, and if their readers were interested in the subject of education, the Editors, I am sure, would be glad to publish or write more on the subject than they do, just as they publish and write on politics, when their readers are interested in politics.

Many of the first minds in our country have, within a few years past, been endeavoring to throw light on the subject of education, showing its importance to the individual, family, and State; exposing the enormous defects of our School systems, showing, too, how these defects may be remedied, and how our children may derive double the advantage they now do, from the money expended; yet the mass of readers in our State are as ignorant of this information, as the people of China or Japan! The reports of our State Superintendent, as also those of Horace Mann, of Mass., on Common Schools, one would

suppose to be the very information our people would be eager to read, as being most intimately connected with their prosperity; yet how few papers publish so much as *extracts* from these reports, when their readers, too, are the very persons for whose benefit such reports are made? Why is this? Evidently because the patrons of these papers, most of them having children to educate, feel too little interest in their education even to read on the subject! Many who call themselves *mothers*, preferring to read, and have their daughters read the silly romances and love stories with which the columns of their newspapers are filled, rather than *dull extracts* on the commonplace subject of education!

The extracts on education, they say, are so *dull*! The eloquence of Horace Mann on Common Schools dull!! Dull it may be to those parents who feel no interest in the education of their children; dull to those patriots (!) who feel no interest in the welfare of the rising generation; dull, too, to the readers of *fiction*, just as meat and bread will be insipid to the drunkard, or as the most wholesome food will be insipid to the child whose taste is vitiated by sugarpuns and sweet-cake. Many Editors, I know, would prefer spreading before their readers *more knowledge* and *less fiction*, if their readers would only be satisfied; yet Editors may do much to correct and form the taste of their patrons; and when the people of our State feel so little interest in a subject of such vital importance as that of education, surely Editors can do no better service for their country or their readers, than use their efforts, as they may see fit, to awaken a deeper interest in this subject. J. T.

Dr. Smith's Essay.

We would very gladly, if we had room, lay before our readers entire the Essay read by Dr. O. Smith at the last meeting of the Washington County Educational Association. Such discussions cannot fail to do good. Notice how exactly to the purpose are his

FEW WORDS TO TAX-PAYERS.

"Are you one of the tax-payers who support these schools? Have you cheerfully paid your assessments? Or, have you taken especial pains to inform community, that you consider that so many *dollars* and so many *cents* have been taken from your purse, and that you receive no equivalent? If so, then have you forgotten that our government and laws have protected your person and property thus far, and that to enable them to do so, it is necessary for them to draw upon you for this purpose; and that in supporting common schools you are only supporting the happy substitutes of standing armies—the pageantry of kingly power—to awe the *populace*; or, that when you have well educated a child, no matter whether your own or your neighbor's, you have most probably freed community from the *liability* of supporting this child, either in the alms house or penitentiary; or paying for his more expensive egress from the gallows! Which will you choose to support, our common schools or the institutions for which our schools are substituted? The answer is plain. Then let us bear cheerfully

these trifling assessments, and not strive, in our vexation and wrath, to break down the usefulness of these institutions, by the unhallowed course of curtailing their length, or throwing them out of popular favor, so that community, thinking them useless, may adopt a more niggardly course in their support."

And again his

HINTS TO PARENTS.

"But there is a mental preparation, of far more importance than the personal, which belongs exclusively to the parent and guardian to provide. I mean a reverence of authority; a quick, cheerful submissive obedience to the commands given; not perhaps, based upon a full conviction of the reasonableness of the requirement, but in the confidence the child may have in the judgement, and good intentions of the one whose province it is to make the requirement. Not in the presumption of the mind of the child, that he must obey or receive corporal punishment; but the child must obey only because it is right; because obedience makes him happier and better; and because it secures the approbation and affection of those whose right it is to govern. A parent or guardian who sends a child to our schools without this reverence of authority, imposes upon the teacher, and the authority of the district, a disagreeable labor which they have no right to impose. Besides they hinder the progress of the school; they take time, which is money, from the other scholars; they become the nucleus around which gather the spirits of *insubordination* and *strife*. They become the bane of our schools; the pest of society. Indeed, this want of reverence of authority in childhood, will almost invariably be followed in after life, by a daring recklessness; by a coarse, vulgar demeanor; a want of all those principles which command the respect and affections of associates and acquaintances."

If you take a pound of iron, and make it into a rod a foot long, what weight will it support. But if it be a hollow rod it will support a weight many times greater than before. Nature seems to have taken advantage of this also, long before mathematicians had discovered it, and all the bones of animals are hollow. The bones of birds are large, because they must be strong to move their large wings with sufficient velocity; but they must also be light in order to float easily upon the air. Birds also illustrate another fact in philosophy. If you take a bag, make it air tight, and put it into water, it will support a large weight, say a hundred pounds. But twist it, or diminish the air in it, and it will support no such weight. Now birds and fishes have such an air-bag.

If we make a spot on the periphery of a wheel, travelling on a plane, the figure which that spot describes is a cycloid. Now there is no figure in which a body can be moved with so much velocity and such regularity of speed, not even the straight line.

Mathematicians discovered this not many years ago; but Nature's God taught it to the eagle before mathematics were invented; and when the eagle pounces upon his prey, he describes the figure of a cycloid.

For the School Journal.

American Dictionaries.

No. V.

In the last number, I gave a brief account of Worcester's "Universal and Critical Dictionary," and also the abridgement which he calls the "Comprehensive Dictionary," and instituted a comparison between them, and the Dictionaries of Webster, both in relation to the definitions and system of notation for the orthoepy. I now resume the latter subject.

In Webster's Remarks on his Key to the Pronunciation, he says, "The obscure *a* is usually the short Italian *a*, as America. The obscure *e*, *i*, and *y* have the open sound of *e* shortened, as in event, labial, duty; and hence in respelling for pronunciation, the *e* is used to denote these sounds. The obscure *o* and *u* have their regular open sounds, but somewhat shortened, as in monopoly, superfluous. When the unaccented syllable ends in a consonant, the vowel which it contains, if single, has its regular short or shut sound, as in assign, explain, furnish, connective, calumny; but *a* in such words as monarchy, &c., has the faint sound of the Italian *a*. In neither of these cases should the sound of the other vowels (*a*, *e*, *i*, *o*, *y*) run into that of *u* in tab."

"In his Introduction to his largest work, on the other hand Webster says, "Dr. Ash remarks, that the different vowels, in unaccented syllables, are pronounced alike, or nearly so. Thus, in the words *alter*, *alter*, *manner*, *manor*, *murmur*, all the vowels of the last syllables have nearly the same sound. Hence it is useless to mark the unaccented vowels, their sounds being too obscure and indistinct to be defined, or to be distinguished by marks."

Is there no discrepancy between these two observations? Worcester has satisfactorily avoided this difficulty, by giving examples of the obscure sounds of each vowel in his "Key to the sounds of the marked letters" as follows:—

- a* obscure . . . Liar, palace, rival, abbacy.
- e* obscure . . . Brier, fuel, celery.
- i* obscure . . . Elixir, ruin, logic, ability.
- o* obscure . . . Actor, confess, felony.
- u* obscure . . . Sulphur, murmur, deputy.
- y* obscure . . . Truly, envy, martyr.

The very great similarity, if not entire sameness, of the obscure sounds of all the vowels in these marked syllables, in the mouth of any one who does not draw, cannot fail to be remarked.

What a wonderful improvement has been made in the orthoepy of Dictionaries since the days of Walker. I will give a few examples from the above table. The vowels marked in Italics in the words palace, rival, abbacy, as in the *a* in fat; the *e* in fuel, as the *i* in pin; the *e* in celery, as the *e* in here; the *o* in confess as the same letter in hot, &c. But, although the improvement has been great, much still remains to be done. It would occupy more room than can be spared to enter into details here. I shall confine myself, therefore, to a class of words to which the attention of orthoepists cannot be too soon directed.

Two sounds are given to the vowel *y* in the words *my* and *thy* in Worcester's Dictionaries, viz., the ob-

scure sound of *e* and the long or alphabetic sound of *y*. Webster gives the latter only. Worcester, here, is undoubtedly in the right. But he has failed to give a clear reason for it. It is "pronounced *my*," [the long sound] he says, "whenever distinctness is needed; as 'My pen is worse than yours.'" But the true reason is, that all good speakers give these words the long, open sound of *y* when *emphatic*, and the short, obscure sound when *not emphatic*. The reason is plain. Emphasis requires stress of voice and length of tone, and the alphabetic sounds cannot be pronounced without some degree of both of these, more especially of the latter. Those readers and speakers, therefore, who persist in giving those sounds to syllables which have neither accent nor emphasis, a prominent fault in readers and speakers, destroy the force of the sentence by weakening one or other, or both.

But this anomaly, of a different pronunciation to the same word under different circumstances, is by no means confined to *my* and *thy*. On the contrary, if we examine with care we shall find that it extends to nearly all, if not to all, the pronouns and prepositions in the English language. Mr. Worcester, then, has only just commenced the reform which is so much needed. The following sentences will distinctly show the defect which has been noticed in the orthoepy of our dictionaries. The words in italics are intended to be emphatic. It was necessary they should be marked, since they are unconnected with the context, from which alone the emphasis can be ascertained. Any one, I think, who will read these sentences with care will readily perceive the actual difference of sound.

Sentences in which words are differently pronounced according to their emphasis.

ME, pron.

Emph. Give it to *me*.

Unem. Give *me* the book.

THEM, pron.

Emph. She gave it to *them*.

Unem. She gave *them* the book.

YOUR, pron.

Emph. It was *your* book.

Unem. Give *me* your book.

IN, prep.

Emph. They went *in*.

Unem. She fell *in* the field.

ON, prep.

Emph. Go *on*.

Unem. Lay it *on* the table.

CAN, v.

Emph. I *can* do it.

Unem. I *can* do it.

HAVE, v.

Emph. I *have* done it.

Unem. I *have* done it.

Here it may not be unimportant to remark, that the word *that* is differently pronounced when used as a demonstrative pronoun, from what it is as a relative, or a conjunction.

Demon. Give *me* that book.

Relative. The man that fell down.

Conjunct. I say, that this is wrong.

None of the lexicographers have attended to this. All have given the pronunciation alike in the three words. The same remarks apply to the word *there*, which is pronounced differently according as it is used as an expletive or an adverb, as in the phrase "There was there a herd of many swine."—*Bible*.

Lexicography, like geography, is a progressive science. New things and new ideas are continually requiring new names. It is in vain, then, to look for perfection in a dictionary, after the lapse of a few years from its publication. It is hardly to be expected, indeed, at the moment of its passing from the press. Worcester's large work was printed in 1846, and that of Webster in 1848. Below are some of the defects and deficiencies I have met with in these two new dictionaries, without even expressly looking for errors, but merely in the course of casually consulting them.

Either. The definition of this word is defective in Worcester. He has omitted the sense of *cach*, as in the following phrase :

"In the midst of the street of it, and on *either* side of the river, was there the tree of life."—*Bible*.

Quarter, quarters. The arrangement of definitions had in Webster. Those in the singular and those in the plural so mixed up, as not to be readily distinguishable.

Chloroform. Altogether wanting in Webster.

Because. The part of speech not distinguished in Webster.

Samphire. Imperfectly defined in Worcester. He has not noticed the plant to which this name is affixed in the United States.

The following words are wanting in both dictionaries :

Actinism, *n.* chemical influence of sunbeams.

Maro, *n.* the apron worn by islanders in the Pacific.

Bute, *n.* a conical volcanic hill, rising out of the plains, like an island from the water, sometimes to the height of one or two thousand feet.

Baidarka, *n.* a leathern canoe, entirely covered, except one or more holes for rowers, which they entirely fill.

On the whole, then, it will be conceded, that Webster's largest work is the most valuable Dictionary extant, especially in the important points of definition and etymology, and that it will doubtless obtain the preference in the study and private library. Worcester's larger Dictionary evidently ranks next, being superior as to orthoepy to Webster's works, and fully equal to his large octavo in the derivations and definitions. And, finally, that for a school Dictionary for pupils, Worcester's duodecimo is by far the most suitable, if price as well as other matters be taken into consideration. For teachers, however, the large octavo editions of Webster or Worcester are indispensable.

In regard to school dictionaries, however, it will be but fair to enable your readers to draw their own conclusions, by comparing the definitions of the Comprehensive Dictionary of Worcester with those of Webster's University Edition, and of his School Dictiona-

ry, given in the November number of the School Journal, p. 102. I therefore conclude this series of articles by annexing them. Those who take a deep interest in the improvement of our schools will doubtless be pleased to make the comparison.

VIGIL, *n.* a watch; devotion; a fast.

SPIRIT, *n.* an intelligent being imperceptible to the corporeal senses; an immaterial substance; the soul; a ghost:—temper; disposition; excitement; ardor; vigor; life:—strong liquor.

STREAMER, *n.* an ensign; a flag; a pennon.

VISION, *n.* the act of seeing; the faculty of seeing; sight:—a supernatural appearance; a spectre; phantasm; dream. P.

Pittsford, Dec. 23, 1848.

P. S. The works of Webster and Worcester noticed in this series of papers, are the only *American* Dictionaries with which I am acquainted, except one which was published in Burlington, N. J., in the year 1813, entitled "A new Critical Pronouncing Dictionary of the English Language," "By an American Gentleman." Its system of pronunciation is the vicious one of Walker; and moreover the revolutions which science has undergone since it was issued have rendered it obsolete. I have confined my attention, therefore, to the works of the two eminent American lexicographers.

For the School Journal.

To Teachers.

My Dear Brethren:—You have been employed to manage and instruct a company of children. You are expected to devote your time, not merely six hours a day, but also your time morning and evening, to your school. You are expected to be *familiar* with the branches you profess to teach, that without hesitation, and in an inviting and clear manner, you may lay open, and impress upon your pupils' minds, every lesson they recite. To do this may, in most cases, perhaps, demand a *daily preparation*. Have you a time and place at your command for this important part of your business? You have, doubtless, a good school-room, where you labor six hours a day. If you wish to devote two or three hours more to your school, have you a place for it? Or is it your painful part to "*board around*,"—to *wist* all winter—to spend your evenings and mornings in "*common talk*"?

Permit me, brethren, to speak freely my sentiments on the very common practice, in some parts of the State, of *compelling the teacher to board around the district among his scholars*. 1st. *It injures the teacher's health*. It makes his diet and the time of taking it, as various as the families with whom he boards.—Sometimes he will have a warm dinner, sometimes a "cold bite." One morning he will breakfast at six, the next at nine, or a few minutes before nine.

He must also change his lodging very frequently—perhaps once a week. Sometimes he sleeps in a warm, sometimes in a cold room, and in every variety of beds. From this cause alone, he may expect *severe colds*, at least every time he changes lodgings.

In addition to all this, he must forego many things

very important for every man, but almost essential to a teacher's vigor of body and mind also, such as bathing; that quiet and interesting place where the mind unbends itself and the whole soul finds its equilibrium—*home*, &c.

Now the teacher has a *stomach* like other men, and needs *quiet slumbers* as much as other men, and should observe nature's laws in himself as closely as other men. Can he abuse one by irregular diet, and forego another, and entirely disregard another of these things, and suffer no injury?

2d. The practice *impairs the teacher's mind*; for it effectually takes away all opportunities for patient systematic study of any kind, and induces habits of mental inactivity, or mental inanity. To be *acceptable*, the teacher must spend his mornings and evenings in conversation respecting things of every day occurrence, which indeed "profiteth some, but not much," and does not produce, but detracts from mental vigor and power.

He that teaches others to study, shall he not study? It is to be hoped that he, who is to inspire children with love of mental labor and improvement, has the fire burning in his *own bosom*, and will be an *example* to all in the profitable employment of his time. The teacher who is to wake up and direct the undying intellects of some forty or fifty pupils, should himself be a man of *thought*. He should daily prepare himself for his work in the school-room, invent and modify means, ad infinitum, to wake up and lead forward his pupils, and investigate for himself the science and art of teaching, which presents many subjects worthy of frequent and thoughtful investigation.

3d. The practice *injures the School*. It takes from the teacher, health and mental vigor. Every scholar suffers by consequence. It deprives the school of two or three hours extra labor daily from the teacher.

Why does not the minister of the Gospel, board among the members of his congregation? Would he, then, preach indifferent sermons? The teacher does not, indeed preach *written discourses* to his school, but his *lectures*, on a multitude of subjects, are very numerous.

He, as well as the preacher, should bring before his audience "things new and old," and "rightly divided," into small morsels sometimes the word of truth. His words, his actions his countenance, are, as it were *life or death*, unto the tender hearts before him.

Is it not then of vast importance, that the teacher of children should be so provided for, that he may, without anything to distract his mind, or impair his energy of body or intellect, pursue his vocations "as a workman that needeth not to be ashamed?"

Westminster West, Jan. 6th, 1849.

L.

Washington County Educational Association.

The first annual meeting of the Washington County Educational Association was held at Montpelier on the 4th of January.

An Essay was read by Dr. Smith, and Mr. Howard of Thetford, delivered an address. The question, "Ought books to be used, either by teachers or pupils, in time of recitation?" was discussed.

The following Resolutions were adopted:—

Resolved, That we regard the office of County Superintendent of such importance in the regulations of our schools, that it cannot be dispensed with, without essential injury to community.

Whereas, the duties and responsibilities of Teachers in our Common Schools, are very great and require much preparation to meet their claims; and whereas Teachers' Institutes are among the important and more efficient means of acquiring such preparation;

Resolved, That this Association is satisfied that the Legislature of this Commonwealth could confer no greater favor upon our Common Schools, than by making suitable provision for establishing and supporting Teachers' Institutes.

Resolved, That we have increasing confidence in the usefulness of Teachers' Institutes, and we hope soon to see the time, when none but such as have had the advantages of these, or equivalent special preparation, elsewhere, will be employed as Teachers in our Schools.

The next meeting is to be held at Waterbury on the 7th of June next; for which occasion the following subjects are assigned:

For Essays—1. Extent of Teachers' government and authority, as to manner and time when it commences and ceases. 2. The claims of Teachers' Institutes.

For Discussion—Do select schools tend to advance the general education of the people?

President, Rev. E. J. Scott; Secretary, Geo. Nicholls, Northfield.

Chittenden Co. Teachers Association.

A meeting of the Chittenden County Teachers' Association was held at Milton on the 11th inst. F. B. Wheeler, President, A. P. Sherman, Secretary.—Among the business transacted was the adoption of the following Resolutions:—

Resolved, That the general encouragement now given to irresponsible Select Schools in this Commonwealth is very detrimental to the prosperity of our Common Schools.

Resolved, That more importance ought to be attached to the location, construction, finish, heating, ventilation and furniture of school houses than, it appears most of our population imagine.

Resolved, That in our opinion Teachers Associations are calculated to awaken an interest in the improvement of our Common Schools and that they should be sustained.

Resolved, That in the examination and employment of Teachers' especial regard should be had to their moral qualifications.

Resolved, That as members of the Chittenden County Teachers' Association, we pledge ourselves to make all the efforts in our power to elevate the standard of Common School instruction, and that we cordially extend our invitations to those teachers, in this county and elsewhere, who are making like exertions, to unite with us in this great cause.

Resolved, That we believe that our County and

town Superintendents may do much to advance the cause of Common School education, by making the examinations of teachers more rigid and thorough than they have for years past.

Duties of Pupils.

1. Scholars should be constant in their attendance at school.
2. They should always endeavor to be at school in season.
3. They should have a strict regard to all the regulations of the school.
4. They should be studious, and improve all their time to the best possible advantage.
5. They should be honest in regard to their lessons.
6. They should be neat and orderly in their personal appearance and habits.
7. They should avoid the use of profane and improper language.
8. They should always speak and act the truth.
9. They should be kind and pleasant to their companions, and to all with whom they have intercourse.
10. Their deportment in the street, and elsewhere, should be orderly and becoming.
11. They should love God and keep his commandments.—*Hon. H. Barnard.*

The Spirit of Improvement.

The spirit of improvement thoroughly awake in a family is an inestimable blessing. Not only upon its members is its influence precious beyond all price; but it is a diffusive spirit, and will awaken everything good that comes within its sphere. The account of the introduction of the late Sir Thomas Buxton to the Gurney family beautifully illustrates this:

"At the age of fifteen Buxton left school, an overgrown, rough, and in everything but his sports, an idle boy. He is described as spending whole days when no better amusement offered, riding about the lanes on his pony, with some amusing book in his hands, while graver studies were laid aside. The reproof and ridicule of his friends served only to annoy him, and might have been of serious and permanent injury to his character but for a fortunate connection which he at this time formed. The Gurney family of Earham Hall, near Norwich, was distantly related to his own, and with John, the elder son, he had before this period become acquainted. Thither he went on a visit, and from this moment is dated the development of the better part of his character. Mr. Gurney's family consisted of eleven children, some of them singularly endowed by nature, and all of cultivated and refined minds, and busily occupied in the work of self-education. Joseph, John, Samuel, and Elizabeth Gurney—afterward Mrs. Fry—were among the ornaments of this circle. Into it young Buxton was warmly welcomed, and the example and encouragement of his new friends soon awakened all the fine powers of his mind which had hitherto lain dormant, aroused in him a taste for literary pursuits and a love of study, and exercised no less a healthy influence upon his manner and disposition. The friendship which thus sprang up among the young

people, gave the direction to all his after life, and ripened not long afterwards into a nearer and warmer relationship. "My visit here," he said in a letter to his mother, "has completely answered. I have spent two months as happily as possible; I have learned as much (though in a different manner,) as I should at Colne, and have got thoroughly acquainted with the most agreeable family in the world." And many years after, in referring to this visit he says: "I know no blessing of a temporal nature (and it is not only temporal) for which I ought to render so many thanks as my connection with the Earham family. It has given a color to my life. Its influence was most positive and pregnant with good, at that critical period between school and manhood. They were eager for improvement—I caught the infection. I was resolved to please them, and in the College of Dublin, at a distance from all my friends, and all control, their influence, and the desire to please them, kept me hard at my books, and sweetened the toil they gave."

Yes—once within the charmed circle of a family busy in the work of self-education, and Buxton at once became a MAN.

The human eye has a mirror on which objects are reflected, and a nerve by which these reflections are conveyed to the brain. Now when the eye is too convex, we use glasses to correct the fault. But as birds cannot get them, Providence has given them the power of contracting the eye, of making it more convex, so as to see the specks which float in the atmosphere; and also of flattening the eye, to see a great distance. In addition to this, they have a film, which can be suddenly thrown over the eye to protect it; because at the velocity with which they fly, and with the delicate texture of their eye, the least speck of dust would act upon it as a penknife thrust into the human eye. This film in the horse's eye, is called the "haw," or third eye lid, and if you will watch closely, you may see it descend and return with electric velocity.

SCHOOL HOUSES. A neat, clean, fresh-aired, sweet, cheerful, well-arranged, and well situated house, exercises a moral as well as a physical influence over its inmates, and makes the members of a school peaceable, and considerate of the feelings and happiness of each other; the connexion is obvious between the state of mind thus produced, and the habits of respect for others, and those higher duties and obligations which no law can enforce.

A parabolic teacher, who delights in calling forth the thinking powers of his pupils, lately asked a member of one of his youngest classes to give him an example of a verb. "Man," replied the boy quite readily. "How so, my child?" enquired his master. "Because," said the little philosopher, "a verb expresses *being, doing, or suffering*; and if that be true, man is the greatest verb I know, for he unites the whole three."

Parents and Teachers.

PRAY, CONSIDER THIS SHORT EXTRACT.

What we are about to copy is from an Address to Teachers. Perhaps after reading it, some may doubt whether it comes home to them or to Parents. Certainly, we could name the place, and we doubt not many of our readers could, where the case of the teacher is well described in the concluding sentence. But even then, let him tug. It is worth an effort for years to revolutionize such a place. The author is the Hon. HORACE MANN.

EXTRACT.

The teacher's duties are not confined to the school-room. He has duties, almost as important, out of it, as in it. It has been well said respecting clergymen, that the relation and the intercourse, which they hold with their people during the six week-days, determines the question, whether or not they shall do them any good on the seventh. And the relation which the teacher holds to the parents in the district, goes far towards measuring the usefulness he can confer upon their children in the school. During the very first weeks of the school, there should not only be a good understanding, but a friendly intercourse, established between the teacher and the parents. This, it is the duty of parents to proffer. Their welfare and the welfare of their children require it. Common hospitality requires it. Is it not barbarian, to allow any man, who is fit to keep a school, to come into a district and remain there for months, without any tender of civilities to him? The parents, then, should seek acquaintance and proffer hospitality. But if they are neglectful of this obvious duty of common politeness, still the teacher is not to keep his term through in ignorance of the people among whom he lives. He has a right, always, to call upon the prudential committee-man. Through him he may seek acquaintance with others, making himself interesting to them by inquiring into the progress of their children, commending their conduct when it is commendable, asking advice and assistance in correcting them, when it is not. Parents love to have their children the theme of conversation. Some of them would stop in the middle of a thanksgiving dinner, to enjoy that luxury. When a stranger evinces a sincere, generous, disinterested interest in the welfare of children, there are few hearts so selfish, as not to throw open their iron doors, and bid him a hearty welcome. The teacher can approach the parents through this avenue. Many occasions will occur when the teacher and parents will be thrown, as by chance, into each other's presence,—in the street, at the meeting, at a friend's house, or elsewhere. The teacher must seize upon these occasions, show that he is interested in his work, listen to their wonderful stories about the prodigies they send to school, stay by them, walk with them, do any thing but *drink or smoke*, to prolong the interview and excite their interest in the school. This is a great affair, and worthy of great efforts. It is the teacher's duty, day after day, to toil in his school; week after week, if we may use

a sailor's phrase, to pull at the rope, but what a difference it would make in the draught, should every parent in the district take hold and pull with him. Were all to take hold with him as one man, how easily, as well as swiftly, could they raise up the children out of the dark depths of ignorance and error. But what can one poor teacher do, tugging alone, if half the parents pull at the wrong end of the rope, or, in their listlessness, jump on to increase the weight to be raised.

Something Cheap.

BY CHARLES SWAIN.

There's not a cheaper thing on earth,
Nor one yet half so dear;
'Tis worth more than distinguished birth,
Or thousands gained a year;
It lends the day a new delight;
'Tis virtue's firmest shield,
And adds more beauty to the night
Than all the stars may yield.

It maketh poverty content,
To sorrow whispers peace;
It is a gift from heaven that's sent
For mortals to increase.
It meets you with a smile at morn,
It lulls you to repose;
A flower for peer and peasant born,
An everlasting rose.

A charm to banish grief away,
To snatch the frown from caro;
Turn tears to smiles, make dullness gay—
Spread gladness every where;
And yet 'tis cheap as summer's dew,
That gems the lily's breast—
A talisman for love as true
As ever man possessed.

As smiles the rainbow through the cloud,
When threatening storm begins;
As music mid the tempest loud,
That still its sweet way wins;
As springs an arch across the tide,
Where waves conflicting foam,
So comes this seraph to our side,
This angel of our home.

What may this wondrous spirit be,
With power unheard before—
This charm—this bright divinity!
GOOD TEMPER!—nothing more!
Good temper! nothing more!
That woman homeward brings;
And can the poorest peasant lift
To bliss, unknown to kings.

There is a form called the "solid of least resistance," which mathematicians studied for many years to discover; and when they had discovered it, they found they had the form of a fishes head!

It is a waste of time to complain of other people's faults. The best thing we can do is to mend our own.

He who, even by a look, sanctions in his son any disrespect towards his teacher, dishonors his own immediate representative, and gives to his child a powerful lesson in outlawry.

THE AGRICULTURIST.

For the Vermont Agriculturist.

Facts in Chemistry.

The operation of the laws of nature affords a study of the most interesting character, and well worthy the attention of every intelligent creature. The perfect order and system, the nice balancing of different properties and principles, and the wonderful adaptation of means to ends and of all things to the circumstances in which they are placed, which is every where exhibited, is calculated to fill the mind with admiration and astonishment. In whichever way we turn, the same order and perfection meets our observation, and the more we examine, the more we admire. The intricate machinery, the delicate organization of our own bodies, would afford a study for years. The air that we breathe, the various forms of animal life, the vegetable creation, the physical character of the globe we inhabit, the countless worlds and systems which are all flying with almost the rapidity of thought, through the fields of ether, while each is bound in its own orbit, yet performing its part in the intricate maze; are all subjects worthy a careful investigation, and capable of affording the most refined satisfaction.

The air which surrounds the earth, and which is so essential to vegetable and animal life, is composed of different substances, but the quantity of each cannot be materially varied without producing the most disastrous effects. It is principally a mixture of oxygen and azotic gas or nitrogen. In 100 parts of air, 21 parts are oxygen, which is the source of life and heat to the animal and vegetable kingdoms, and 79 parts are nitrogen. Should these proportions be varied, so that the quantity of oxygen be larger, the consequence would be a universal combustion, and the whole world would be enveloped in flames; but should the azote preponderate in a greater proportion the vital principle would become extinct, and all animals and vegetables would languish and die. Besides these chief ingredients the air contains a small quantity of *ammonia*, *vapor*, and about one tenth of one per cent of *carbonic acid gas*. Although invisible to us these gases are as much composed of particles of matter as the hardest rock, and in the work-house of nature these particles are seized and converted into vegetables and animals, and they in turn, when life has become extinct, are gradually dissolved into gases and returned to the air.

United with these gases in organized vegetable and animal life, are a small amount of mineral substances, derived from the earth; but all that is thus derived from the earth is comprised in the ashes which remain after combustion. A piece of pine wood weighing 100 pounds, if burned would almost entirely disappear. Only about half a pound of ashes would remain, and all the rest would be returned to the atmosphere. The 99½ pounds thus returned to the air consists wholly of four substances, *oxygen*, *nitrogen*, *hydrogen*, and *carbon*. Now these four substances differently united, constitute the food of plants, and

are again constructed into vegetable forms. Oxygen and nitrogen as has been said, form air, oxygen and hydrogen form water, oxygen and carbon form carbonic acid gas, and hydrogen and nitrogen form ammonia. Man feasts himself on a thousand dainty varieties of food, but vegetables ask for only three of these compounds, viz: *water*, *carbonic acid gas*, and *ammonia*, and a very small portion of earthy or mineral substances, which as before mentioned remain as ashes after combustion or decay. The greater proportion or from 40 to 50 per cent. of vegetables is carbon, and it is singular that so small a constituent part of the atmosphere, only a 1000th part should be so selected and appropriated by plants as to constitute nearly one half of all vegetable substances on the globe. If wood is covered up from the air and ignited as in a coal-pit, all the water, oxygen and ammonia is expelled, and the carbon remains alone in the shape of coal. Charcoal is pure carbon with the exception of the earthy substances which constitute the ash. When charcoal is burned, the carbon unites with the oxygen of the atmosphere again, and forms carbonic acid gas, which so often proves fatal to those who heat their sleeping rooms with charcoal.

Ammonia is another article taken up by the plant, and this enters largely into the formation of the seed. It exists in the blossom and fruit before it is ripe, and in the wood as albumen. It also forms gluten which is the nutritious parts of all the cereal grains, as well as of the root crop. In short a plant may grow without ammonia, but it cannot produce seed or fruit. This substance unites readily with water, and spirits of hartshorn is a solution of ammonia in water. Carbonic acid gas combines readily with ammoniacal gas, and produces a solid substance, the carbonate of ammonia, or the common smelling salts of the druggist. Now the principal benefit of manures is to supply this all essential article of food to the growing plant. By the decay of vegetable or animal substances, ammonia is formed in large quantities. The live vegetable sucks it up in its roots or absorbs it in its leaves, and thus adds to its growth. It seizes the little particles and converts them into the elements of the plant. It is plain then that manure should be so protected that the ammonia may not all escape into the air. If it is covered with loam or muck, the ammonia will rise up into the muck or loam as the manure decomposes, and render that covering, also, good manure. The yards also may be covered with these substances, and the ammonia contained in the liquid parts of manure would also be absorbed and saved.

Now let the young farmer remember a few facts in chemistry and we will at a future time bring up a few other facts.

First. All the parts of plants which do not remain as ashes after combustion, are composed of four substances, oxygen, hydrogen, nitrogen, and carbon. The plant, when perfectly dry, is composed of about one half carbon, something more than one third of oxygen, about 5 per cent. of hydrogen, and 2½ per cent. of nitrogen,—the remainder of the plant being earthy substances forming ashes; though these proportions vary in different plants.

Second. These four substance are usually combined to fit them for food of plants as we combine Indian and rye meal to make bread; and three distinct kinds of food are formed which are all the plant needs or will take. First, *carbonic acid gas*, formed of carbon and oxygen. Second, *water*, formed of hydrogen and oxygen. Third, *ammonia*, formed of hydrogen and nitrogen. AGRICOLA.

Addison County Agricultural Society.

The annual meeting of the Addison County Agricultural Society was held at Middlebury, Jan. 18.—For the ensuing year Hon. Elias Bottom is President, E. W. Blaisdell, Jr., Secretary, H. Hany Goodrich, Treasurer.

Funds from members, \$209. The following gentlemen were appointed delegates to the National Convention of Fruit Growers, to be held in New York, in October next:—

Solomon W. Jewett,	Henry C. Hunt,
Silas H. Jonison,	Stephen Barroughs,
John M. Weeks,	Albert Chapman.

The Report of the Committee on Field Crops is so good that we copy it entire:—

REPORT.

Your Committee on Field Crops would say that the applicants for premiums do not generally understand the terms on which they are allowed; for there are but few of the specifications full enough to entitle them to a premium. Some are deficient in their statement certified, others in samples, and others in having a sample but no specification. None are as full and explicit as they should be, and others might derive that benefit from their experience which was intended by your society. The premiums are awarded as follows:

WINTER WHEAT.

Best Acre, 45 bushels and 20 qts., to Mr. Elijah Grovenor, Bridport,	\$ 5.00
2nd best do., 36½ bush., James Hamilton, Bridport,	4.00
3d best do., 33 bush. and 2 qts., Mr. Wm. H. Baldwin, Whiting,	3.00

SPRING WHEAT.

Best acre, 39 bush. to Mr. Martin Cowles, New Haven,	5.00
2d best do. 40 bush. and 23 qts., Mr. Allen Smith, Addison,	4.00

Had Mr. Smith's wheat been as free from four substances as Mr. Cowle's, and the amount the same, he would have been entitled to the first premium.—There were no other applicants whose specifications came within the spirit of the rules of the Managers in the opinion of your committee, to entitle them to a premium.

Mr. Oliver Smith, of New Haven, presented a statement of 40½ bushels of winter wheat, 42 of peas, and 113 of corn per acre, all of which would have been entitled to a premium, if he had complied in presenting the committee with evidence and samples. But they would congratulate him on his successful husbandry which is worthy the emulation of others. Also, Mr. Reuben Wheeler, of Ferrisburg, presented

statements and samples of five different crops, but neglected to produce evidence, together with Mr. Allen Smith of Addison, who was deficient in defining the manner of cultivating the crops which he presented.

Your committee would recommend the importance of changing your seed, and if possible procuring it from the north instead of the south, and using none but good plump seed. It is very essential that wheat should be soaked in strong brine of salt for twelve hours, dried with lime, and sown as soon as possible if you expect your crop to be free from smut. We do not wish to be understood as saying that it will always prevent it, but it is a preventive. Your committee would suggest to those who intend sowing winter grain, and whose soil is not in so high a state of cultivation as desirable, whether you would not find it to be a better course, to plow your lands in the spring, as soon as other business will permit, and sow buckwheat, oats or rye, to be turned under just before putting in your seed, and well rolled just before and after harrowing. By adopting this course, you convey back to the soil all the nourishment the plants derived from it during their growth, besides what they received from the atmosphere, which is believed to be no small amount, and at a less expense than of applying manure, and far preferable to the old method of summer fallowing. There does occur, every year, a loss to the farmer, by not having his land properly laid into beds of suitable width, and in neglecting to have them well protected by furrows, that no water may stand upon the plants, or the soil be too wet;—for when it is dry, then it will perfect its seed first, and is not liable to be injured by rust as on moist land. It may be said there is an objection to having land plowed into beds when you intend it for mowing. Your committee would answer this objection by plowing in August, after the crop is taken off, as level as possible, and stock now with grass seed. By so doing, you imitate nature's course, and it is believed that less seed would be lost than in seeding in the spring.

We feel confident in saying that if those who plant corn would plant less, by one third, or one half, and bestow the same amount of labor and manure upon it, they would find it to be a more profitable crop.—Were you to manure liberally, (and it is rarely you do too much) and apply thorough tillage to your land, the yield might be sixty or seventy bushels per acre, whereas at the present time, it does not exceed thirty-five or forty, and the saying that my land is becoming too weedy, and must be stocked down, would become obsolete.

The cultivation of roots of some kind to a greater extent is worthy of a trial, since the potato crop has become so uncertain. Previous to the potato being diseased, large quantities were raised for fattening hogs and feeding to other stock. But of late your corn crib has suffered to supply the deficiency. May there not be found a substitute by growing carrots and sugar beets? Horses do well on carrots and hay; hogs on sugar beets, and most kinds of farm stock will eat both.

It is generally admitted, that stock do better and are less liable to disease during the winter, when fed daily or weekly upon roots, than on hay alone.

There may be safely grown three or four times the quantity of carrots and sugar beets per acre, and at less expense per bushel than potatoes. We have omitted the applicants' mode of producing their crops, with the request that they may be printed, which is respectfully submitted by

Q. C. Rich, for Committee.

Field Crops in Washington County.

We extract the following from the Report of Field Crops, made to the Washington County Agricultural Society, at its last meeting. Hon. Jacob Scott, Chairman.

EXTRACTS.

WHEAT. The first premium was awarded to Mr. John Robinson of Calais.

Raised on a piece of hard wood land, cleared for a pasture. Timber burnt upon the land, and the ashes from the heaps carefully spread over the ground.

The wheat was of the Black Sea kind—sowed the 22d day of May, 1½ bushels to the acre. Seed washed, brined, and limed. Amount raised, 28 bushels and 20 quarts.

From the above statement, there are two important facts derived: 1st. The value of ashes as manure to our grain crops; 2nd. The importance of thoroughly preparing the seed before sowing. Every farmer who has cleared new land is aware, that on every place where a heap has been burned and the ashes suffered to remain without spreading, the growth is so luxuriant and heavy, that the crop is destroyed. No other reason can be assigned only, that ashes are the most valuable manure, to most of our grain crops, that can be used. 2nd. The importance of having the best seed, and that seed well prepared by the application of brine and lime, which by the way, (both act as a manure,) has been often neglected by our farmers!

CORN. On the best acre of corn, the premium was awarded to Lorenzo Gray at Montpelier.

Land plowed or mowed for 40 years. 1847 pastured till October, when it was broken up. Plowed 4 inches deep. In May, 31 loads of manure was spread broad-cast, and well harrowed and furrowed. One half was manured in the hill from the hog-sty. Rows 43 inches apart—hills 32 inches apart—planted the 17th, 18th and 20th of May, 5 kernels in the hill. After the second hoeing, an application of 75 pounds of plaster was made to that part manured with green manure.

Amount of crop 90 bushels. Expense of cultivation estimated as follows:

Plowing,	\$ 1 50
Manuring,	2 25
Planting,	1 25
Hoeing,	2 25
Plaster and application,	75
Harvesting,	4 00
Preparing the land,	1 75

Total expense, \$ 13 75

Value of the crop—corn at 67 cents per bushel,	\$ 60 39
Three loads of pumpkins,	3 00
Four tons of fodder,	12 49
Total,	\$ 75 88
Subtracting expenses,	\$ 13 75
Leaving,	\$ 62 13

The committee are of opinion that the expenses of cultivation are not set down high enough, and the value of the manure is not brought in as it should be, nor the interest on the value of the land. All of which would probably reduce the profit to fifty dollars or less.

The second premium was awarded to Henry Nutt of Montpelier—land broken up in the fall, 7 inches deep—harrowed in the spring; 33 loads of manure spread broad-cast, with 600 pounds of plaster well mixed. Seed, small eight rowed kind. After the first hoeing an application of ashes, lime and plaster was made at the rate of ten bushels to the acre.

On the best acre of potatoes, the premium was awarded to Levi Robinson of Calais.

Land new—Seed large round pinkeyes—cut once—one piece in a hill—amount raised, 289 bushels and 3 pecks to the acre—planted the last of May—not hoed—weeds pulled.

2d Best to David French of Barre. Land broke in the fall of '47, harrowed about the 20th of April and planted; used 300 pounds of plaster. Put into the hill when the potatoes were planted, used 15 bushels of seed—dug early in September. Expense of cultivation and harvesting, \$30. Land had been mowed some 7 or 8 years before, and yielded about one ton to the acre. Amount raised, 246½ bushels.

The kind of seed used was Pinkeyes. Sold 100 bushels of Pinkeyes at Montpelier for

146 bushels at 50 cents per bushel;	70 00
Making,	20 00
Expense,	30 00
Nett profit	\$ 90 00

Your committee, after a full examination of the application for premium on the several crops, are more fully convinced of the necessity of a more thorough system of manuring and cultivation than ever. Take, for instance, any of the above crops, upon which premiums have been awarded, to show the fact that a great part of the labor of the farmer is unpaid, by the small amount of the crop which they obtain. They are also convinced of the fact, that our land even in Vermont, may be made to yield three times the amount by a judicious systematic course being adopted in plowing and manuring.

The Receipts of the New York State Agricultural Society last year amounted to about \$9,400; of which \$6,272 is put to the credit of the Show at Buffalo, and \$700 was given by the State.

Useful employment is conducive to virtue and happiness.

From the Plow, the Loom and the Anvil.

Vermont and Maryland Husbandry Compared.

In the preceding number we expressed the apprehension that we might not have time for this comparison; nor can we make it now, except in some strong points of view, which, we are aware, must leave it very incomplete. Enough, however, may be suggested to set the reader to *thinking*; and that, let us tell him, is half the battle gained in a contest between error and truth. In fact, the great difficulty, according to our observation, in the way of meliorating the condition and character of the American farmer, is *to get him to think*? If you could, would you see him, for example, go even three times, instead of three thousand times, through his own gate, that either strikes the ground and *drags* before it reaches halfway to the post, or else falls with such force against it that you may hear the dreadful concussion a mile off? Would you see him losing fifty dollars worth of time in a year in pulling down and putting up bars, to say nothing of occasional destruction to his crop when they are *not put up*? Would you see him stooping to the pommel of his saddle for seven years to avoid a limb of a tree, in his daily ride, that one stroke of a hatchet would remove? No; *you cannot get them to think*! But enough of that. The two States that we are going to compare, in some points of view, differ somewhat in size, but not so much as in some other things; Maryland having 11,000 square miles, or 7,000,000 acres, while Vermont has but 8,000, according to Darby, or 5,120,000 acres. Now see the difference in their agricultural pursuits and economy, and the results to which they have conducted these two old sisters of the Republic.

In Vermont winter lasts, and cattle and sheep are fed, five months in the year, sheep at a cost per head per annum, as we have often been told, of what would actually fetch from \$1 to \$1 15; while in Maryland they are rarely if ever fed, except when the snow covers the ground, (which does not average a week in a year,) when they have, *scattered on the snow*, some corn-blades, or perhaps sheaf oats. And, with all these disadvantages, the Vermonter has the sagacity to go strong upon cattle, and sheep, and wool, and hay, and potatoes, and milk, and butter, and cheese, &c., content to let the Marylander beat him in *horses*, (the most precarious and expensive investment that can be made in animal flesh or power,) and in wheat and corn, rye, and tobacco, all of which the earth yields by bushels and pounds, instead of tons; and which, at last, are all sand away off the farm, yielding no return to the land that produced them.—Let us follow the comparison more exactly on some points indicative of the sources that go to produce increase of population, and political power, and appreciation of land, and the contrary.

	Horses.	Cattle.	Sheep.	Wool, lb.
Vermont,	62,402	384,311	1,681,819	3,699,235
Maryland,	92,220	225,714	257,922	488,201
	Potatoes, bushels.	Hay, tons.	Fulling mills.	Woollen factories.
Vermont,	8,860,751	836,739	239	95
Maryland,	1,036,433	106,687	39	29

Now, what is the lesson in the political economy of the plow that this view of these States teaches? Does it not go to show that wise States, when not made subservient to the colonial policy of other countries by the subservient policy of their own, will keep the loom and the anvil near to the plow? where nature, if left alone, would place them as naturally as she places the country mill near to the corn-house. And what, reader, is the effect of a course of husbandry that does keep them together, and enables the farmer to consume on the lands the products of the land!—Why, the effect is just this: that, as here we see, Vermont wearing her garments of snow five months in the year, in 1790 begins on a basis population of only 85,416, and runs it up in fifty years to 291,948; while Maryland, the favored of Providence, starting at the same time with a population of 319,128, has gone in the same period up to only 470,000—the former doubling her man capital more than three times over, the latter not half doubling hers once!

In Vermont their manufactures have given rise to ten towns within her 8,000 square miles, with populations ranging from 2,000 to 10,000. In Maryland there are but four such in the compass of 11,000 square miles. In Vermont the farmer sells potatoes and mutton, in Maryland wheat and tobacco! wheat averaging throughout the State not more than seven or eight bushels!

So says the veteran J. S. SKINNER, at whose feet we would gladly sit to take lessons upon so many subjects connected with rural industry. But alas his life has been spent among slaveholders, and even he has apparently failed to learn—certainly he fails to teach as the lesson deserves—the great secret of the difference between Vermont and Maryland. The soil of Vermont has been the property of no slaveholder and has been tilled by no slave since she became a State. We thrive, and our towns become populous, not because of our limited manufactures chiefly, but because each one cultivates his own acres with his own hands, and those of his intelligent and vigorous sons; who understand so well the *how*, the *where*, and the *when*, that a single blow by one of them will bring as much to pass as half a dozen blows by a Maryland slave.

The Fruit Market.

A letter in the New York Courier and Enquirer, dated at London, June 10, 1848, says:—

"The fruit-trade here is a very large one. So much so, that many persons devote their attendance exclusively to a *single* fruit; as for instance in the cherry orchards of Kents; and in this instance the cherry is of a singular kind, (the Kentish cherry) and that a sour, thin, poor cherry, only fit for pies, and never introduced into desserts. By the laws of England, all preserves from foreign countries, into which sugar is introduced, pay a very heavy tax—sixpence per pound.

"Is there not some speculating, ingenious Yankee, who has the desire to lay the foundation of a fortune for himself and his family, by introducing American

apples, in some mode by which they can be preserved for table use in England, during the winter, without the use of sugar! The dried apples—both whole and in slices, (duty two shillings and sixpence per cwt.) are brought from the Continent; and as they are introduced year after year, one can only suppose that the importation of them must be lucrative. It will, however, be requisite to avoid the great fault of all Jonathan's exports; a practical belief that quantity not quality is the one thing requisite; and that if he sends a mass from his wharves it will be sufficient—regardless alike of the condition in which it may arrive, and of the probability of its pleasing the eye of the purchaser.

"The dried apples [whole] from the continent arrive in beautiful and clean baskets of wicker-work, containing from six to ten pounds; each apple chosen for its soundness, and the whole of them assorted in sizes and ranged in rows, with all the neatness of a spinster's work-box."

"We have been told of the sale of dried apple in Boston at a shilling a pound. The apples of course were good; and they were neatly sliced for drying, and came in packages that recommended the taste and neatness of the curer.

Slicing is a neat way of preparing apples to dry, and in that way they are more easily cooked than when in quarters. Another neat way is to pare the apple and then remove the core by a corer, leaving the body of the fruit whole. Then it might, when dried, be prettily packed as above.

In Ohio, fruit is sometimes dried for market in a kiln constructed for the purpose. We find the following account of one, and of the work it does, in the Ohio Cultivator:—

TREMONT, STARK CO., O., Sept. 9, 1848.

MR. BATEHAM.—A short time ago I contemplated writing to you for information through the Cultivator as to the best mode of constructing a kiln or dry-house for drying apples, but finding there would not be time for an answer to be obtained before I should need to build one, I immediately went to work to devise a plan and construct a house according to my own notions, which on trial, has succeeded entirely beyond my expectations; and a number of my neighbors are pulling down their old log dry-houses, and building new ones after my plan. I am therefore induced to send a description of it for the benefit of the readers of the Cultivator; and at the same time I would request that if any one can give a better plan he will do so.

This kiln is small and compact, is easily managed, and requires less fuel for the work performed than any other style of kiln I ever saw. If rightly tended it will yield six bushels of dried fruit each morning—(if made of larger size of course the quantity will be greater). It holds eighteen bushels of fresh cut fruit, and only requires the fire to be renewed four or five times in the 24 hours to complete the drying; it also dries all the shelves equally, so that the fruit can be all taken out at one time.

The Plan of my house is as follows:—Dimensions, six feet by ten (outside the wall), height of front wall say 13 feet, of back wall 10 feet, with a shed roof.

The furnace is 15 inches in height and width, and extends from the arch in the middle of the end wall the length of the house inside, [built of brick, covered with flat stones, we presume,—Ed.] and is plastered 1½ inches thick on top, to prevent danger of fire from cracks. On each side of the furnace a flue returns (horizontally) to the chimney, which is carried up inside the wall directly over the arch. In the side walls of the house, nine pairs of cross-pieces, of 2½ by 3 inch scantling, are set three bricks apart, and six inches from the end walls, on which the baskets or drawers are to slide. In the upper corner of each gable end wall is a window or opening, six inches square, to let the steam pass off. The walls are plastered inside, and also the roof, by lathing on the under side of the rafters. The doorway is in the middle of the front wall, and is five feet high by seven feet wide; or rather it has two doors of 3½ by 5 feet. In front of the doorway the cross-pieces are moveable, (resting on those fixed in the walls) for the convenience of putting in and taking out the drawers. The drawers or baskets are four feet long and two wide, so that each tier contains four baskets.—They are made of laths 1½ inches wide, nailed on three cross-pieces 1½ inches square, with 4d nails. Outside the door is a platform to stand upon when arranging the fruit, from which the upper shelf can be reached. (If thought best, the doorway can be made the full height of the range of shelves; then you have a complete bureau kiln, with every drawer accessible from the outside.)

The Materials required for this house, are 3500 bricks, 12 bushels lime (unslacked), 1000 lath, 252 feet (running measure) scantling, 500 shingles, 6 lbs 4d nails, 100 feet plank and door-frame stuff. The whole cost in this place is only 25 or 30 dollars, and any farmer of common ingenuity can do all the work except the bricklaying.

Respectfully yours, &c.,

SILAS H. GARD.

MANAGEMENT OF HORSES. We have no domestic animal among us, that costs us so much, that will do a greater variety of work, or that is so much abused, as the horse. Like his master, the horse is complicated in his structure, and liable to a great many diseases; and as he is capable of being made to exert all his powers of body in the efforts of speed or severe labor, nine tenths of them are out off in the prime of life. And yet by care and attention, by kind and humane treatment in working and feeding, he can be made to endure a great many years, active and strong. Mr. Pell, of New York, has given some excellent rules for the management of horses, which were published in the Transactions of the New York Agricultural Society. Among the good ideas which he there advanced he observes:—"Feed them in winter on a variety of food, such as oats, ground and whole, bran, strip stuff, beans, peas, turnips, carrots, potatoes, and parsnips, occasionally steamed separately and together. In summer keep them always confined in airy stables, and feed them on clover, bruised grains, green corn stalks, cider pomace, oil cake, hay, &c. Be particular to give them three fourths of a

pound of salt per week; occasionally two ounces of sulphur, and frequently two ounces of wood ashes.

"By good keep and judicious management, a pair of horses, perfectly sound when young, will last, and labor constantly, twenty-five years, and to the end retain their spirits. I have a pair of bay horses," he observes, "on my farm that are now twenty years old, during which time they have never been at pasture, and have worked daily; they have never been incapacitated for work by lameness or disease of any kind, and have always been perfectly healthy." He also adds that he has "another pair of sorrels that are eighteen years old, which labor daily, and will do as much work as any pair of six years old."

The above statements of Mr. Pell are worth listening to, and his advice should be followed. Much loss would be prevented, and much suffering to a faithful and useful animal be warded off, while the long-continued powers for labor would amply reward the extra care and kindness thus bestowed, even if the virtue of mercy to those brutes intrusted to our protection were not taken into account.—*Maine Farmer*.

MAPLE SUGAR. A good man will make six or seven hundred pounds in three weeks. The man that took the premium at Auburn in 1846, kept all vessels clean. He ran the hot sugar into conical vessels, having a half inch hole, plugged at bottom, until the sugar was thoroughly hard; then put three layers of woolen cloth on top, and poured on a pint of water every morning for three weeks in succession. The water looked like brown molasses, and the sugar, when done, like loaf sugar.—*New England Farmer*.

Rutland County Agricultural Society.

From a comparative statement by the Secretary it appears that the amount of premiums awarded by the Rutland County Society has been regularly increasing from year to year in nearly all departments.

Respecting Butter and Cheese, the Secretary notices the particulars in which the practice of the successful competitors differs from that most common:—

"Amos Hitchcock, Esq., of Pittsford, to whom was awarded, the first premium for butter, informs us, by his specification, that he kept but two cows, and they were grass fed only. He does not tell us the process of manufacturing, but says; 'the butter was preserved by sugar and salt, three parts salt and one part sugar.' Loaf or lump sugar pulverized was probably used. Might it not have been this use of sugar, which gave to his butter a flavor entitling it to the first premium? Manufacturers of butter will do well to try this mode of seasoning.

"Mr. George Willard of Pawlet, who took the first premiums for cheese, says that he 'milks fifty cows. The evening's milk is strained into two tubs and cooled with ice. In the morning the cream is skimmed off and the milk warmed to about blood heat, and then strained into the morning's milk. Then rennet sufficient to curdle the whole is added. When curdled it is cut into small pieces and permitted to stand till hard enough to work, when it is scalded quite hard. The whey being drained off, it is cooled

with one pail of cold water to about one hundred and fifty pounds of curd. A tea cup full of salt to twenty pounds of curd is added and then pressed quite hard. All is made up in one cheese."

"Mr. Willard's mode of making cheese does not vary materially from the other applicants for premiums, except in cooling his milk over night with ice, and the curd with cold water. This may have given him the advantage over other competitors. If so, they will hereafter have the advantage of the information, and one object of the Society subserved."

Bread Making.

It is a great mistake of some housekeepers that bread is better for having soured and been sweetened by the use of saleratus. The best and most nutritious bread is made by being baked while the flour is in the highest stage of the saccharine fermentation;—when it passes that stage before baking, it is less nutritious and less wholesome as well as less palatable. Saleratus may neutralize the acidity, but it can never restore the natural sweetness of the flour.

Sweet bread cannot be made of sour yeast. The yeast must be sweet or it will sour the flour in rising. It is better to sweeten the yeast, if it has changed, than to let the bread sour and be under the necessity of adding saleratus to the whole. We have practically tested the merits of all the kinds of yeast in common use, and have long since settled down in the firm conviction that "potato" is unrivalled in all the qualities for which a bread riser is extolled. In the first place, it develops the saccharine quality of the flour most perfectly; second, it takes less than half the time in rising bread; and third, it gives no foreign taste to bread. But as there are various ways of making potato yeast, here is our recipe: Take five common sized potatoes, boil them soft and mash them thoroughly while hot; pour on them a quart of boiling water and stir thoroughly; while scalding hot add one cup of flour and stir again. To this add one teaspoonful of ginger and two or three spoonfuls of molasses, and when cool enough not to scald, add a small cup of yeast to rise it.

In making bread, use the proportion of one cup of yeast to about six cups of milk and water; stir in flour till you have a stiff batter; set it in a warm place and in three hours it will be as light as a sponge and ready to knead into loaves. Let the loaves rise to full one third more than their original size, then place them in an oven not hot enough to blister, but hot enough to bake them a fine brown, top, sides and bottom. If the oven be too hot it will crust the bread before the gasses formed can escape, and the bread will miss that delicate sweetness and tenderness which is so desirable; if too cool, it will verge to the acetous fermentation or have a pasty and vitrified appearance, if we may so speak. The sooner bread rises the better, in our opinion, especially in hot weather; and to this end we put our flour to the water or milk as warm as it can be without scalding the yeast, which is first added.

We make our bread as moist as we can cleverly knead it, believing that on a due degree of moisture

depends the perfect development of the nutritious properties of the flour. And for the same reason, and to have the grain of the bread fine and tender, we knead it a long time. Bread thoroughly kneaded will never be filled with large holes; these are the consequence of an imperfect mingling of the particles of the flour with the liquid; the greater moisture of some portions trying to escape, forms cavities whose surface, smooth and impervious, shows the nature of the active agent.

Small sized loaves are better than very large ones, for the reason that the interior of the loaf is brought under the influence of heat simultaneously with the external surface. The principle is the same as regulates the degree of heat to which we subject our bread in first putting it into the oven. Some house-keepers seem to think it is just as well to put their bread into a cool oven and let the heat rise afterwards; it is a fatal error.

We have been particular in details, ladies; but we can do things better when we understand the principles on which they are perfected, and we have formed a strange and perhaps tedious habit of inquiring into causes. If you happen to have the same inquisitive bump in your heads, our domestic rendering will suit you all the better. At all events we hope you will profit by your experience.—*Windham Co. Dem.*

Vermont.

Let me speak of a district or country with which I have been many years familiar (the State of Vermont, United States). It is a purely agricultural district; it contains nearly half a million of inhabitants; its climate is cold and severe; its soil, with some exceptions, of moderate fertility, and requiring the brave and strong hand of toil to render it productive. It has public and free schools in every town and parish, and several seminaries of learning of a higher character, and where the branches of a useful and literary education are taught, at an expense so moderate that it is placed within the reach of persons even of the most humble means. It has every where places of religious worship, of such a variety that every man may follow the dictates of his own conscience, where religious services are always maintained with intelligence and decorum, sustained wholly by voluntary contributions; and sects of the most discordant opinions live in perfect harmony, recognizing in their mutual dependence the strongest grounds for mutual forbearance and kindness. Taken as a community, they are the best informed people I have known; and they have numerous and well-chosen circulating libraries in almost every town. They have no connection with any great market; and the produce which they have for sale goes through intermediate hands to the great marts. They have few or no poor, and those only the emigrants who may stroll there from neighboring provinces. The sobriety of the people is remarkable; they are every where a well-dressed people; their houses abound in all the substantial comforts and luxuries of life; and their hospitality is unbounded. They understand their rights and their duties, and have often distin-

guished themselves by an extraordinary bravery and manliness in their defence. No where is public order more maintained, or public peace better preserved; large portions of the inhabitants never bolt a door nor fasten a window at night; and in a village of some thousand inhabitants I have known a garden stored with delicious fruit with no other fence than one which served as a protection against cattle, as entirely secure from intrusion or plunder as if it had been surrounded even with a prison wall, bristled with chevaux-de-frise. In this State crimes are comparatively rare; courts of penal justice have little occupation; the prisons are often without a tenant, and there has been scarcely a public execution for half a century. From such an example of a community almost exclusively agricultural, I have a right to claim for agricultural and rural life all the beneficial moral and social influences to which its most enthusiastic admirers pretend.—*Coleman.*

The Markets.

BRIGHTON MARKET—THURSDAY, Jan. 25.

At Market 480 Beef Cattle, 25 Stores, 2500 Sheep, and 190 Swine.

Prices—*Beef Cattle*—Last week's prices were fully sustained. We quote extra \$6 75; first quality, 6 a 6 25; second, 5 50 a 5 75; third, 4 50 a 5 25.

Stores—Dull; no sales noticed.

Sheep—Sales at \$2 50, 3 50, \$4, 4 75.

Swine—One lot at 44c. At retail from 44 to 6c.

BOSTON, Jan. 27. WOOL. Sales of 45 bales Smyrna washed 17c, and unwashed at 10c; 40 bales Black washed 12c per pound, 6 months. Large sales of American Fleeces within our quotations.

Prime Saxony Fleeces, washed, lb.	37	a	38
American full blood, "	33	a	35
do $\frac{1}{4}$ a $\frac{3}{4}$ "	28	a	30
do $\frac{1}{4}$ and com. "	23	a	25
Lambs, super "	28	a	30
Do. No. 1 "	24	a	26
Do. No. 2 "	17	a	19
Do. No. 3 "	10	a	12
Smyrna, washed, "	17	a	20
do unwashed, "	9	a	14
Bengasi, "	8	a	9
Buenos Ayres, "	6	a	15
Crimea, "	5	a	8
Mexican, "	12	a	13
Barbary, "	25	a	—

—*Daily Advertiser.*

FANEUIL HALL MARKET.

WHOLESALE.				SEED—RETAIL.			
Beef, fresh, lb.	7	a	12	Apples, barrel,	1 50	a	2 50
Mutton, 1st qual.	6	a	9	do. dried, lb.	0 00	a	0 00
2d	3	a	6	Beans, bush,	1 50	a	1 75
Lamb,	4	a	8	Pears, bushel,	0 00	a	0 00
Veal, lb.	5	a	8	Potatoes, barrel,			
Pigs, roasting,	1 00	a	1 25	New,	2 00	a	2 75
Chickens, lb.	10	a	12	Common,	3 00	a	0 00
Turkeys,	1 25	a	1 50				
Geese, mongrel,	1 00	a	1 25	Clover, North, lb.	10	a	12
Pigeons, dozen,	6 00	a	6 75	Southern,	8	a	9
Pork, per 100 lbs.	7 75	a	8 50	White Dutch,	00	a	25
Lard, best, pr. bbl.	8 00	a	8 50	Lucerne, or French,	33	a	33
Western, keg,	8 00	a	8 50	Herdgrass, bush 3 25	3 50	a	3 50
Butter, lump, lb.	20	a	25	Red Top, bushel,			
do. skinned,	18	a	22	Northern,	1 25	a	0 00
Cheese, new milk, 7 1/2	a	22		Southern,	65	a	88 1/2
do. four meal, 5	a	6		Orchard Grass,	—	a	2 00
Eggs, doz.	25	a	30	Fowl Meadow,	2 50	a	0 00

ORLEANS COUNTY AGRICULTURAL SOCIETY. At the Annual meeting of the Orleans County Agricultural Society, held at Irasburgh, Jan. 12, Thomas Guild of Coventry was chosen President; S. R. Hall, Corresponding Secretary; H. Hastings, Recording Secretary; George C. West, Treasurer; with a Board of Managers consisting of one from each town. The list of Premiums for field crops is before us, but without any specifications.

Domestic Economy.

VIRGINIA GRIDDLE CAKES.

- A quart of Indian meal.
- Two large tablespoonfuls of wheat flour.
- A heaped salt-spoon of salt.
- A piece of fresh butter—about two ounces.
- Four eggs.
- A pint, or more, of milk.

Sift the Indian meal into a large pan; mix with it the wheat flour; and add the salt. Warm the milk in a small saucepan, but do not let it come to a boil. When it begins to simmer, take it off, and put the butter into it, stirring it about till well mixed. Then stir in the meal, a little at a time, and let it cool while you are beating the eggs. As soon as they are beaten very light, add them gradually to the mixture, stirring the whole very hard. It must be a light batter, and may require more milk.

Having heated the griddle well by placing it over the fire or in the oven of a hot stove, rub it over with some fresh butter, tied in a clean white rag, and pour on a large ladle-full of the batter. When the cake has baked brown, turn it, with a cake-turner and bake the other side. Then take it off and put it on a hot plate. Grease the griddle again, and put on another cake—and so on till you have three or four ready to send to the table for a beginning. Continue to bake and send in hot cakes as long as they are wanted.—Eat them with butter, to which you may add molasses or honey.—*Miss Leslie's Indian Meal Book.*

HINTS FOR CHOOSING MEAT AT MARKET. We have often been surprised at the ignorance displayed by house-keepers, in the selections which they have made for their families. Many seem to think, if they have chosen from an over-grown beast, or bird with large bones, and loaded with masses of fat upon its flesh, that they have been particularly lucky in securing a good dish; when, in all probability, they have taken the very worst, and the least profitable for consumption.

In purchasing a quarter of an animal, or a piece from it, we should select such as have the smallest, thinnest, and flattest bones, covered with the fat inter-mixed in thin streaks or layers with the lean. This will almost invariably be found tender, juicy and profitable. On the contrary, meat with large, round, thick bones, of a coarse grain, and showing the fat in thick slices or lumps, will prove tough, unsavory, and so far as the profitable part is concerned, not worth so much by 30 or 50 per cent as the finer bone qualities.

Poultry, which has long, coarse legs, long, round and plump bodies, and a fine short neck and head, if of suitable age, should be preferred.

These remarks do not apply with the same force to fish; for several kinds of the most bony are very good eating, although they may not be as profitable as those of fewer bones. The most delicate, however, have rather a small number of bones, compared with the amount of meat they give; For example, the salmon, bass, cod and mackerel, of the salt water; and the Mackinaw trout, muscalonge, and the white fish of the fresh water.

Very large vegetables are not usually as delicate as those of medium size; but to this rule there are many exceptions. As for fruits, the largest are generally the best.—*American Agriculturist.*

FIRE AND WATER PROOF CEMENT. To half a pint of milk put an equal quantity of vinegar, in order to curdle it; then separate the curd from the whey, and mix the whey with four or five eggs, beating the whole well together. When it is well mixed, add a little quick-lime through a sieve, until it has acquired the consistence of thick paste. With this cement, broken vessels and cracks of all kinds may be mended. It dries quickly, and resists the action of water, as well as a considerable degree of fire.

A CEMENT FOR STOPPING THE FISSURES OF IRON VESSELS. Take two ounces of muriate of ammonia, one ounce of flowers of sulphur, and sixteen ounces of cast-iron filings or turnings; mix them well in a mortar, and keep the powder dry. When the cement is wanted, take one part of this and twenty parts of clean iron filings or borings, grind them together in a mortar, mix them with water to a proper consistence, and apply them between the joints.

TO PREVENT IRON FROM RUSTING. Waim your iron till you cannot bear your hand on it without pain to yourself. Then rub it with new and clean white wax. Put it again to the fire till it has soaked in the wax. When done, rub it over with a piece of serge. This prevents the iron from rusting afterwards.—*Farmer and Mechanic.*

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACK,

and sent to subscribers on the following

TERMS:

For a single copy, - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " " - -	3 00
16 " " " " " - -	4 00

And any greater number at the rate last named, or
25 cents per copy.

☐ Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for

THE SCHOOL JOURNAL, And Vermont Agriculturist.

VOL. II.

WINDSOR, VT., MARCH, 1849.

No. 11.

THE SCHOOL JOURNAL.

For the School Journal.

To County Superintendents.

The undersigned would again call the attention of County Superintendents to the subject of written examinations, for the purpose of urging the general adoption by them of this mode of examining teachers.

It must be apparent to every one who looks at the subject, that the attempt to ascertain satisfactorily, in a single day, the attainments and qualifications of a class of twenty or thirty candidates, by the ordinary oral mode of examining, must essentially fail of its purpose. And when the number to be examined at a time amounts to fifty, or perhaps seventy-five, as is sometimes the case, it is not probably saying too much to affirm that the examiner cannot, unless he possesses an uncommon grasp of mind, form any idea in regard to individual qualifications that will even approximate to a just conclusion. His questions to each individual in a given branch of study, must be few in number, and those too of such a nature, perhaps, as to furnish no good criterion for judging of the candidate's general acquaintance with the subject to which they relate. And then there is a difficulty in retaining the impression, as to correctness or otherwise, conveyed at the time by the answers given by each individual;—a difficulty which amounts to utter perplexity and confusion when those examined are entire strangers. And we appeal to any one who has attempted to examine a large class in the manner contemplated, if he has not felt himself to be groping in thick darkness in endeavoring to form his final conclusions upon individual cases, unless some one were present on whose judgment he might rely for aid.

The advantages of the written mode of examining and the general manner of conducting examinations by this method having been presented in a Circular contained in the School Journal for last April, it is deemed unnecessary to enter into details here in regard to them. A few suggestions, however, upon the subject, may not be improper at this time.

The advantages of the proposed mode may be summed up as follows: 1st. It enables the examiner to put a greater number of questions to each individual in a class, and, such, too, as would be more conclusive as tests of scholarship. 2d. It groups together the several answers of each candidate, so that the examiner can see them at a glance, in forming his conclusions. 3d. It preserves a record for future use.

To prepare for conducting an examination by the proposed method, the Superintendent should write down, in advance, some twenty or thirty questions in each of the several branches in which teachers are to be examined. In drafting the questions, the prominent aim should be to make them comprehensive and clear; while at the same time brevity, both in the question and the appropriate answer, should not be lost sight of.

In examining a class, the Superintendent should read off some ten or fifteen of the questions on a particular branch, directing the class to copy them,—leaving, after each, a space for writing the answer. The number of questions given out would, of course, depend somewhat upon their character. If comprehensive of general principles, a small number would suffice.

During the process of writing the answers, it should be understood that pupils are to have no communication with each other; and to enforce this regulation it might be announced that any such attempt would be taken as equivalent to an incorrect answer. After allowing a proper time, the several sheets—each signed—should be collected; and then another series of questions may be given out.

While pupils are engaged in answering the second series of questions, the Superintendent may be examining the answers to the first. A cursory view would enable him to judge of their general correctness, and to form from them, at once, a much more correct conclusion than he could from the distant and but half remembered answers to some three or four oral questions. But there will be some conveniences in having a table in which the general results of the whole examination will appear at a glance. This table would be prepared by setting down under the appropriate heads, (specifying the several branches) and against the name of each pupil, the number of substantially correct answers. And the proportion of these to the whole number of questions given out would determine the decision.

In examining in Orthography, the Superintendent may do well to give out a series of words to be spelled, and perhaps some to be defined, also. In that case, appropriate sub-divisions may be made in the table of results, under the head of Orthography,—embracing number of words correctly spelled, defined, &c. In selecting words for spelling, it might be proper to take some anomalous words in common use that are frequently mis-spelled. But ordinarily such should be selected as illustrate some general principle;—as for instance, those illustrating the various modes of

forming the present participle of verbs ending with vowels, as exemplified in the words, trickling, tinging, seeing, trying, and the like.

But many additional details and variations in the mode of procedure, in examining in the various branches, will readily suggest themselves upon reflection, and especially upon a trial of the plan. The examiner may not feel fully satisfied with his success upon his first attempt; but he will improve as he proceeds. And we would strongly urge each Superintendent to prepare himself for this mode of examining before he goes out for his spring examinations. It may not, in any case, be best that he should be confined, exclusively, to this mode; but it should obviously be his main dependence in the examination of large classes.

The Superintendent feels anxious for the general adoption of the suggested mode because he regards it as far more certain and reliable, and as in fact necessary in order that the examination should be thoroughly and rigidly sustained. The examination must be the life,—the energizing spirit,—of all our measures. Let this become a mere form,—and our whole system of improvement would soon be a lifeless corpse.

The Superintendent would also take this occasion to suggest the propriety of Superintendents availing themselves of the opportunity afforded on their tour of spring examinations, to collect the statistical abstract furnished by town clerks;—calling, if need be, upon each clerk, and assisting in the preparation of the abstract. The statistics furnished last year, except from three or four counties, were *exceedingly defective*,—far more so than they ought to have been.

They can also, at the same time, collect such teachers' reports of last summer schools as may be furnished. For reports of the current winter's schools no blanks have been furnished, in view of the ill success of former efforts. Blanks for reports of the previous winter's schools were furnished for every district in the State; but, setting aside Bennington county, (from which every school was reported), reports were received back from less than one-fourth of the whole remaining number. The Superintendent was reluctant to dispense with these reports, because, so far as they have been received, they have supplied our most valuable statistical information. But under such results and such auspices he did not feel himself at liberty to put the State to the expense of furnishing blanks. It is hoped, however, that at least the returns, for the present year, which come through the medium of town clerks, will be complete.

H. EATON, *State Sup't.*

Enosburgh, Feb. 20, 1849.

Our Next Volume.

One more number will complete the second volume of the *School Journal and Vermont Agriculturist*.

In order that our arrangements for the next volume (commencing with the May number) may be made to advantage, and that we may know how many copies to begin with, orders should be sent with the least possible delay.

A journal of a more expensive kind—the *Vermont State Agriculturist*, published at Burlington,—has been tried during the last year, and has failed for want of support. As the paper was conducted with ability and enterprise, the experiment appears to show that, if we are to have any paper of the kind it must be somewhat on the plan of ours,—so cheap that the price can be no obstacle to its universal circulation; and uniting in its pages, as they are united among us in fact, the interests of agriculture and of popular education. Thus far the plan has been successful. The paper, with the aid of active friends in circulating it, has sustained itself, although without giving the publishers much for their labor. With a circulation throughout the State equal in proportion to what it is in some counties, the publishers would be enabled to expend more upon it, much to the advantage of its readers.

THE WORK TO BE DONE.

All the present subscriptions to this paper of course terminate with the end of the volume. No papers will be sent after the April number without new orders.

It is necessary, therefore, that a new list should be made up in every town where the paper is wanted. Some one should go about it with the determination to make up a list of at least 16, and collect of all he can 25 cents each. The money should then be forwarded, with directions in regard to sending the papers,—by what conveyance and to whom; for, it will be noticed, when the paper is put at that price, the copies are sent to some one person who is to take the responsibility of distributing them. To those who so direct, we will send them, as we have done, to J. Steen, Esq., Brattleboro; Rev. J. D. Wickham, Manchester; J. Barrett & Sons, Rutland; L. W. Clark, Middlebury; S. Huntington, Burlington; J. W. Howes, Montpelier, free of charge; but subscribers, in that case, must get them from those places.

If all who have aided us the present year, will take hold of the work the year to come, in the same way, we shall hope to make not a little advance in extending its circulation in the State. Without such aid, at the price at which the paper is put, and in the present state of the public mind, we are satisfied no work of the kind can be sustained.

For the School Journal.

Notes of Schools.

School No. 25, in town of——. A female teacher, pleasant, communicative, much interested in school, well liked, has taught five successive schools in the same district. Class in geography draw maps on black-board, and recite well. Class of small scholars in reading and spelling very forward. Some whispering and noise, though the school appears well, and shows the advantage of employing the same teacher more than one season.

School No. 26. Primary department. School room high, well swept, convenient, with pure air. A female teacher, pleasant, prompt, decided, has complete control of scholars. No whispering, buzzing, or loud study.—Class in Rhetorical Reader

read uncommonly well. Scholars stood with heads erect, bright eyes, shoulders back, recited well in concert, occasionally changing the key, and showed that children are most happy in school when orderly, studious, obedient, and *mannerly*. Parents visit the school and take an interest in it.

School No. 27, for the larger scholars. All things move on like clock work. No rude gazing, any laughing, or whispering behind the teacher's back. Scholars studious, *mannerly*, *orderly*, appearing as much better than a disorderly school, as a well disciplined company of soldiers than a company of street loafers or stragglers. Teacher asked questions with energy and promptness, and did not stamp, or scold, or strike the bench with his rule to keep order; nor was the stillness in this school the stillness of *terror*, but the stillness of *cheerful obedience*, as pleasing to pupils as gratifying to spectators.

Scholars in both of these schools rise to receive visitors; which is certainly more respectful than to sit and stare at them.

Feb.—. Visited school No. 28. School room small, dirty, cold, uncomfortable, about a foot higher than teachers head; ten or twelve boys huddled together on one seat. Scholars not remarkable for *good behavior* or *good scholarship*. An energetic, *athletic* teacher, capable of governing unruly boys. Some talk in the district of building a better house. Scholars sick with colds.

Feb.—. Visited school No. 29. House small, but neat, warm and convenient. Scholars still, *orderly*, rise to receive visitors. Teacher asks questions in review, has pupils draw maps, takes great interest in schools and education; persuaded the Committee to get a new stove, black-board, shelves for the girls shawls and bonnets, and other conveniences for the school; has also (with others) done much to interest parents in the subject of education; such teachers are a blessing to a district and town.

Feb.—. Visited school No. 30. House very shabby, cold and inconvenient. In cold days impossible to keep warm, and so the scholars huddle round the stove. Seventy scholars in the district, but only about thirty in school; many parents afraid to expose the health of their children in such a cold house. A lady of the village froze one of her feet in the school room this winter while sitting to hear a lecture on common schools. Some prospect of a better house, if the people can agree where and what to build. An experienced, well-qualified teacher, who gives good satisfaction, though neither teacher nor pupils manifested much enthusiasm, as they could not be expected to do in such a house. No parents been into the school.

School No. 31. House small and clean, with new seats. A large nice black-board. Girls shawls and bonnets not hung up. Reading dull and monotonous. Class in Arithmetic appeared well, and scholars generally interested in their studies. This the teacher's first school, and he exhibits the elements of a good instructor. Had occasion to punish a large boy, at which the boy's parents were offended and took all their children out of school. Teacher generally liked by the parents and children in the district.

School No. 32. Teacher a good reader himself, but did not teach the scholars reading; appeared languid and inefficient, afraid to look at his scholars lest he should see them in mischief. Large boys and girls whispering with each other and writing backward and forward on their slates. No parents visited the school.

Feb.—. Visited School No. 33. When I entered the house, scholars did not look up from their books to gaze, but when spoken to by the teacher, all rose in their seats, and, after shewing the usual token of respect, gave attention to their studies. Class of 15 or 20 took their places on the floor *with no noise*, stood erect as soldiers, made their manners, not like clowns, but with gracefulness and propriety. At recess the boys and girls did not hurry out like a flock of sheep, but passed out and returned as *orderly* and *mannerly* as gentlemen and ladies would enter or leave a drawing-room. Several forward scholars, one class nearly through Algebra. Scholars spelled well, *pronounced the syllables*,—when one missed a word, after it was spelled correctly, he spelled it over, *telling also wherein* he had mis-spelled it. Did not observe the least whispering, loud study or noise of any kind, and the scholars appeared cheerful, happy, and interested in their lessons. Teacher young, never taught before, and has more of the natural qualifications for a first rate teacher than are usually found in any one individual.

Feb.—. Visited School No. 34. Scholars read in low, dull, monotonous, senseless manner, teacher asking no questions, and making no corrections.—Scholars spell without pronouncing syllables, and *try twice* or three times on a word. Some interest in the Arithmetic class. Teacher slovenly in his dress and appearance. Scholars did not look as if they washed their hands and faces more than once a week.

In visiting schools, I have observed (1) that *Arithmetic* is best taught, and reading and geography the worst taught of any branches in our schools; (2) the gratifying appearance of the schools where good manners have been taught; (3) the good influence of the visits of parents on the schools; (4) a foolish ambition on the part of teachers to get their scholars *through the book*, *through the Arithmetic* or reading book, and a disposition on the part of parents to judge of the progress of their children by the number of times they go through the book.

JAMES TUFTS,
Supt. of Schools for Windham Co.

NATURE THE CURE OF DISEASE. The universal remedy, without which no single disease can be cured, is the organic strength in man, and water is only one of the many conditions under which the organic strength really cures the disease—that is, is able to eliminate and excrete from the body the matters of disease which are the cause of the disease. The other conditions are, wholesome air, wholesome nutrition, relief from the cares of business and pernicious moral influences, a proper clothing of the body, and, according to circumstances, now repose, now exercise.—*Dr. Rouse.*

To Teachers.

No. II.

DEAR BRETHREN:—Your position, as instructors of children and youth, is one of *tremendous influence*. This is often said,—is it sufficiently felt? You are expected to so direct and instruct your pupils, that they will make the greatest improvement in those studies to which they attend. They should not only acquire knowledge under your supervision, but also learn to *think and feel*. That mind is not truly educated which has the memory well stored with facts, while the other faculties are uncultivated; nor is that true education which merely disciplines the mind, while the passions are not subdued to their due order.

You know, brethren, that the imagination is a very interesting and important faculty of the mind. Indeed, the character and condition of men—their happiness or misery in this life—depend, perhaps, more on the imagination than on any other faculty. It is subject to laws like the other faculties, and may be disciplined as easily. It may be sent, like a dove, through the regions of purity and the paradise of God, whence returning, it will bring to the soul the olive branch of peace and love; or it may go, like a raven, to feed on loathsome carcases, from which it brings back to the heart pollution. This faculty, therefore, should receive constant attention. Its tremendous power over the heart and conduct of men, demands that it should be truly disciplined. And no part of education can be more interesting to teacher or pupil than this. No exercises in the school-room will so effectually “wake up mind” as those in which there is demanded a vigorous effort of the imagination.

All the other faculties, also, should receive their due share of attention. Very young scholars are capable of inventing, of reasoning, of judging, as well as remembering. I have sometimes feared lest the extreme simplicity of school-books should preclude the necessity of any other faculty of the mind in education, except the memory.

A more important—indeed, the most important part of a teacher's duty is to educate the hearts of his pupils—to cultivate the affections, and establish a moral standard of action. Children should be taught from infancy—what men are often ignorant of—to distinguish things essential, and not essential. A love of truth, and what is more, a love of the full influence of truth in the heart, which is the foundation of virtuous character, is very much the result of moral discipline, and is properly the subject of a teacher's influence.

Now, my dear brethren, when you remember that you are not merely giving instruction to your pupils, but forming their minds, either into a beautiful and complete whole, or into a mishapen, deformed mass, and that the habits of thinking and feeling which you are helping to establish, are to affect materially the whole character—the temporal and eternal destiny of their souls,—are you not ready to exclaim “Who is sufficient for these things?” I am, I assure you; and I blush not to say I often tremble in view of the momentous results of a teacher's influence.

But your work does not end here. You are doing “a great work” somewhere else besides in your school-room. That little girl, whom I have in my mind's eye, is the only daughter—and she is tenderly beloved—of a poor widow. The mother cares to live only to see her dear child a virtuous and useful woman. She has sent her to you—for she cannot do it herself—that you may direct her in the way of intelligence and usefulness. The impression you make on that pupil's mind and heart, is of more consequence to that poor widow than the whole world besides.

Another pupil is the son of pious parents, who have consecrated him to God. They have committed him to your care that you may enlighten his mind, and impress upon his young heart the love of truth and usefulness.

Still another of your pupils is to be the support of his parents in their old age. It is of intense importance to them that this child shall be “trained up in the way he should go,” and you are every day, by your influence over him, bringing blessings or sorrows upon their gray heads.

You have, indeed, no scholar in your school who is not loved by some one; and by a secret but effective moral power, you are touching the tenderest feelings of many souls without the walls of your school-house.

I repeat, *yours is a tremendous influence!* Let it all be exerted in inspiring your pupils with a love of knowledge, a love of correct feeling, and correct action. “Finally, brethren, whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report; if there be any virtue, and if there be any praise,” impress these things on the tender hearts whom you instruct earnestly, untiringly. L.

Westminster West, Jan. 23, 1849.

No. III.

DEAR BRETHREN:—Other duties, besides those which strictly pertain to your schools, demand your most serious attention. Wherever you may be placed, you are a member of society, and as such should sustain the character of gentlemen. You will, for the most part, doubtless, fall in with the customs and usages, if they are not positively injurious, of the people with whom you live. True politeness demands that you should pay due respect to them, especially those of people older than yourselves. Your own happiness, also, as a social being, will be greatly promoted by a free intercourse with the people of the neighborhood and town, although you may not in all respects be like them.

But you should remember that you are a teacher,—a guide and pattern of youth, as well out of the school room as in it. It is to be hoped, therefore, that your influence, as a member of society,—and it will not be inconsiderable, especially among the young,—will be virtuous and elevating. I need not say that a teacher should avoid all things which are clownish and vulgar in his department, for they are marks of low breeding. But can you not, brethren, do something to promote

a taste for literature, a love of knowledge, in the social gatherings you frequent, and in the families you visit! You will doubtless find that in very many families there is a shameful neglect of all means of mental improvement, no reading, no instructive conversation, nothing but a perpetual routine of eating, sleeping and talking, while they awake not "to think a minute in a month." And in the social gatherings of the "young and gay" you will sometimes find ten parts perfect vanity, of which an intelligent immortal being ought to be ashamed, and is ashamed, whenever he seriously meditates upon it, while one part is rational good sense, and worthy the attention of man. You will doubtless be astonished at the utter emptiness of the conversation of many who stand well in the estimation of men as members of society. They meet and spend the precious hours, which might be exceedingly profitable in mutual edification and improvement, "in futile visits, where, if the talk were written down, it would amount to little more than the chattering of a swallow."

Can you not, brethren, do something towards promoting better habits and customs in society? I believe you can. If you can, it is your *duty*. Strive by your example, and by some gentle hints, if necessary, to convince all with whom you associate that time is too precious to be wasted in useless "talk;" that the *mind* is of more consequence than the walking clay which it inhabits, and should receive more earnest and constant attention; that it is shocking foolishness, as well as downright sin, for those in the morning of life to be supremely delighted, *enraptured*, by a gush of fashionable nonsense, while they scrupulously exclude from their conversation and thoughts things which are really useful and ennobling; that it is not pride nor pedantry—that it is true politeness—for the young, when they meet for mutual pleasure and edification, to make an effort—for nothing noble can be done without effort—to arouse their intellects to a healthful activity, and awaken their whole souls to a just appreciation of what is pure, beautiful and sublime; that, in fine, man is an intellectual and moral being, as well as an animal, and as pleasure is derived from the gratification of the animal, so far greater and purer pleasures are secured by fully satisfying his spiritual wants. Be assured, brethren, that in laboring to encourage intellectual pursuits and enjoyments in society you are doing a work worthy of your influential position.

You will not, it is hoped, be unmindful of your moral and religious influence in the community where you teach. Be not anxious to secure the friendship of wicked men. Let licentiousness, intemperance, Sabbath-breaking, and all immoral practices receive from your correct deportment a decided frown and reproof. No greater injury can you do your scholars, nothing more pernicious in society, than to encourage vice. Whatever may be your success in managing and instructing your pupils, if they observe in you a want of moral principle, you are doing a fearful work and bringing curses on your own heads. On the other hand, you can do your pupils no greater good, nor be a greater blessing to society, than by example and precept to sustain the pure morality and religion of

the Bible. "These things command and teach: Let no man despise" your deportment; "but be ye examples of the" youth "in word, in conversation, in spirit, in purity." L.

Westminster West, Feb. 3, 1849.

Who does not feel some glow of delight to know that there are among the teachers of our common schools, young men animated by the spirit that breathes in these papers of our correspondent!

For the School Journal.

Moral Instruction.

Visiting a school last Summer, I heard a class read in the "Moral Instructor," and the teacher was very particular to ask the questions in the book at the close of the lesson. Among others, was the all-important question, which occurs so frequently, *is it right or wrong* to do so and so, with other questions of like construction, where the conjunction *or* is used disjunctively. This, by the way, I consider a very awkward method of asking questions.

These questions were invariably asked with the rising inflection, as if the connective was used conjunctively, and as invariably answered by yes or no. The passages of Scripture referred to, were read by the teacher, and neither the scholars or teacher seemed to take the least interest either in the lesson, the questions, or the answers.

I visited another school. A class read a lesson from Sanders' Third Book. The teacher asked such questions as the subject suggested to her own mind. The questions and the instruction came from a full and a feeling heart; every scholar was interested; their countenances glowed, their eyes glistened; and chords were struck which will vibrate forever, I trust, in unison with seraphic lyree.

Inference. In giving moral instruction, something depends upon the text book; much upon the teacher. Rno.

NATIONAL COMMON SCHOOL CONVENTION. It is proposed to hold a National Convention at the city of Philadelphia, on Wednesday, the 22nd day of August next, with a view to consultation as to the best means to be adopted to promote the interests of Popular Education. A local committee of arrangements has been appointed, of which Hon. Joseph R. Chandler is Chairman, and Mr. Alfred E. Wright Corresponding Secretary,—to whom all communications in reference to the proposed Convention should be addressed. Among the names appended to the call for the Convention, we notice those of Bishop Potter, Hon. Horace Mann, and the Superintendents of Public Schools in the States of Pennsylvania, New York, New Jersey, Rhode Island, Connecticut, New Hampshire, Michigan, Ohio and Kentucky.

In several of the Western States, Conventions of the friends of Common Schools have been called, for the purpose of appointing delegates to the National Convention.

Beware of little expenses; a small leak will sink a great ship.

Common School Convention at Bakersfield.

BAKERSFIELD, Franklin Co. Feb. 23.

The friends of Common Schools from different parts of the County, pursuant to the call of the County Superintendent, met at the Methodist Chapel in this place at 10½ o'clock A. M. The Convention was called to order by Rev. Mr. Newton, County Superintendent. Rev. Alvah Sabin was appointed Chairman, and E. D. Shattuck Secretary.

After prayer by Rev. Mr. Samson of Fairfield, the Rev. Messrs. Newton and Samson and Mr. J. S. Spaulding were appointed a committee to prepare business for the convention.

The following resolution was then introduced viz :

Resolved, That the education of the young is an important and sacred duty devolving upon us, as parents and citizens.

The resolution was ably supported by the Rev. Messrs. Newton, Samson, Robinson and Sabin, and was adopted.

The Convention adjourned to meet at 1½ o'clock.

1½ o'clock, P. M.

The Hon. Horace Eaton delivered a very able address upon "The Duties and Responsibilities of the Teacher." After discussion the following resolutions were adopted.

Resolved, That a committee of five be appointed to prosecute without delay the object of establishing a Teachers' Institute for Franklin County.

Resolved, That *Spelling* should occupy a more prominent place, and be more thoroughly taught in our Common Schools.

Resolved, That the best interests of our Common Schools require, in them, the daily use of the Bible.

Resolved, That it is desirable to introduce singing into our Common Schools as fast as practicable.

Resolved, That we recommend to Teachers and Parents the *School Journal*, as worthy of their patronage.

The committee appointed to attend to establishing a Teachers' Institute, were Rev. Mr. Newton of St. Albans, J. S. Spaulding of Bakersfield, Marshall Hall of Berkshire, Dr. Nathan Dean of Georgia, J. H. Hubbard Esq., of Franklin.

It was moved that a copy of the minutes of this Convention be sent to the *St. Albans Messenger* and the *School Journal* for publication.

The Convention then adjourned.

ALVAH SABIN, Chairman.

E. D. SHATTUCK, Sec'y.

For the School Journal.

Notation.

A change has been made in the system of notation within a few years in many, if not all, of our text-books on Arithmetic, for which I am unable to discover the authority or expediency; and I should be much obliged if any of your correspondents would give some information through the Journal of the occasion and object of the change.

If one who received his education in our common schools twenty or twenty-five years ago, were requested to express a billion, trillion, quadrillion, &c., in

figures, he would do it in the following manner, viz : 1,000,000,000,000, — 1,000,000,000,000,000,000, — 1,000,000,000,000,000,000,000,000; that is, he would add six figures for each additional denomination, or multiply a million by a million for a billion, a billion by a million for a trillion, and a trillion by a million for a quadrillion. But if he should call on his boy who is now attending school, to express the same numbers, he would do it as follows, viz : 1,000,000,000, — 1,000,000,000,000, — 1,000,000,000,000,000; or would multiply a million by a thousand for a billion, a billion by a thousand for a trillion, and so on.

Now by reference to Worcester's Dictionary I find "BILLION" defined "a million of millions," and "TRILLION, a million of million of millions," &c.— Webster defines "BILLION, a million of millions; as many millions as there are units in a million. Among the French, a thousand million." And "TRILLION, the product of a million involved to the third power, or the product of a million multiplied by a million and that product multiplied by a million." "According to the French notation, the number expressed by a unit with twelve cyphers annexed." And "QUADRILLION, according to the English notation, the number produced by involving a million to the fourth power, or a unit with twenty-four cyphers annexed,—according to the French notation a unit with fifteen cyphers annexed."

It appears then that the legion of modern arithmetic-makers have substituted the French system for the English; and for no better reason, as I can conceive, than simply to make a change, without, in fact, making any improvement; a principle on which a large proportion of the multitude of new school books which are flooding the country are got up.

It becomes a question now which we shall receive as authority, the arithmetic-makers or dictionary-makers, and whether we shall hold on to the old English or adopt the French system.

AN INQUIRER.

Amusements during the Winter Schools.

However much our district schools accomplish, it is an acknowledged fact that they do not accomplish half so much as they might in the education of youth. It frequently happens that the amusements in which the young people engage during the Winter Schools take off their attention from study, and render the schools nearly useless. The scholars commence the school with interest, study their books evenings, and begin to make progress, when Mr. A's daughters give a party; then Mr. B's daughter must give a party; and then perhaps there is a ball to attend, and the young people, before they are aware of it, become more interested in parties and balls than in the school, and when in school find it more pleasant to visit than to study their lessons. Thus the interest in school is destroyed, the teacher discouraged, the older scholars grow up in ignorance, and the money of the district is thrown away. The teachers themselves sometimes join in these amusements with the young people, till they become so much more interested in visiting than in teaching that the school is worthless, whether the scholars attend or not.

Now these amusements may be, in themselves, innocent; but if they take off the attention of the scholars from study, they are out of place. There are many innocent amusements in which a farmer will not spend his time in haying, or a merchant in the season of business. To be sure, youth may enjoy themselves in these parties; and so might a farmer, and his boys too, enjoy themselves in riding about and visiting in the season of planting and haying; but such enjoyment would be poor compensation for empty barns and grain bins in the winter. So the enjoyment youth finds in their frolics will be a poor compensation for that ignorance and poverty of intellect which will attend through life. Besides, those farmers are most happy who attend to their business; and so are those children most happy who are most interested in their schools and attend to their studies. An idle, dissipated farmer or mechanic is an unhappy man. An idle, dissipated scholar is also an unhappy scholar. It is because we wish to have young people happy, that we wish them to cultivate their minds and not waste the season of study in dissipation.

It is said of Queen Victoria, that, while pursuing her studies, she did not go into company; and surely, if Queen Victoria could give up balls and parties for several years, the young Misses in our schools may do it for three months in a year, without abridging their liberty or their happiness.

Is it not a reproach that so many of the youth in our towns waste their school days in dissipation, growing up in comparative ignorance, when schools are provided, at so much expense, for their education? Ought not parents who wish to have money raised for the support of schools, to feel under some obligations to have their children, for whom the money is raised, attend school, and make improvement?

The tax-payers may well remonstrate with those parents who allow their children to stay away from school, or to engage in amusements to the injury of the school, saying to them: "You tell us we ought to assist in supporting schools (though we have no children to educate) because education is a public benefit. Very well,—we consent to pay taxes to educate your children; but then if we pay taxes to educate your children, we wish to have them educated. We are not willing to have our money thrown away, as it is when your children do not attend school, or waste their time in dissipation. If it is our duty, as good citizens, to pay taxes, then it is your duty, as good citizens, to see that your children, for whose benefit the taxes are paid, are benefited by these taxes. If it is a public benefit, as you say, to have children educated, then it is a public calamity to have them uneducated; and every parent who allows his children to grow up in ignorance, when provision is made for their education, is doing the public an injury, and committing an offence against the State. If, as you say, it is none of our business whether your children attend school and learn or not, then why do you ask for our money? If it is our duty to pay money, it is our duty to see that this money is not wasted, and that the children for whose benefit the money is raised are educated."

In the school reports of Massachusetts the injurious

effects of amusements on the schools is frequently complained of. The report of Franklin says:

"The improvement of some scholars has been retarded the past winter, in consequence of attending a dancing school, and social evening circles for amusement frequently, during the continuance of a day school. The committee are satisfied, that, from the nature of the case, the effect of these evening amusements must be bad. It occasions many absences and unavoidably engrosses much of the time and attention that should be devoted to study. Without now giving our opinion either for or against evening amusements and dancing, if they must be attended to, let it be either before the district schools have commenced, or after they have closed."

Says another Committee:

"Our schools have suffered this year, as in years before, by the scholars resorting to public amusements; and we know not to whom to appeal for a remedy but to parents and guardians."

I am by no means of the opinion that young people need no amusement. I do not think a man or a child,

"Whose blood is warm within, should
Sit like his grandsire, cut in alabaster,
Sleep when he wakes, and creep into the jaundice
By being peevish."

Let children by all means have amusement, but let not their amusements interfere with the improvement of their minds.

JAMES TUTTS,

County Sup't of Common Schools.

Wardsboro, Jan. 1849.

Be what you Seem.

"Be what you seem"—and seem what you should be,
The child of truth, from all dishonor free;
Brave and humane, and generous, just and wise;
Revere what's good—the bad thou wilt despise.

Be what you seem—let virtue grace thy train;
Court her fair hand, nor court her hand in vain;
Disdaining vice, whatever form she bears,
Or tyrant king, or prelate at his prayers.

Be what you seem—let virtue mould each thought,
And form thy heart with every goodness fraught;
Thy tongue persuasive, to enforce them all;
Thy limbs obedient to her honored call.

Be what you seem—the public good thy care,
The unshaken patriot's part with justice share;
Prefer thy country's weal to ambitious views
Of all her foes—e'en Cæsar in thy shoes.

Be what you seem—benevolence open thine eye,
And teach thee how her object to decay;
Befriend the poor—dry up the briny tear,
Nor cease thy bounty each revolving year.

Mankind are very odd creatures. One half censure what they practice, the other half practice what they censure. The rest always say and do as you ought.

If you would not be forgotten as soon as you are dead and rotten, either write things worth reading or do something worth writing.

The idle man is the devil's hireling; whose livery is rage, whose diet and wages are famine and disease.

Tart words make no friends; a spoonful of honey will catch more flies than a gallon of vinegar.

From the Yeoman's Record.

A Song.

TO BE SAID OR SUNG BY THE SCHOLARS IN MOST SCHOOL DISTRICTS IN ORLEANS COUNTY.

AIR—"The Old Oakon Bucket."

How gloomy to us is the leaky old school-house,
 When doleful reality shows to the sight
 The holes in the wall, where the poor little cool mouse
 Drops in just to warm, but runs out in a fright;
 The crack in the door, and the snow that blows into
 It; the broom in the corner, all shivered and wore;
 The putty-bedaubed and clattering window;
 And e'n the old poker that lies on the floor—
 The old oakon poker,
 The soot-covered poker,
 The old oakon poker that lies on the floor.

We children, at morn, with our frost-bitten noses,
 Come shivering in and go shivering out,
 Each with a huge foot-stove, protecting our toeses,
 Scattering black coals and embers about.
 The ever-green wood, in "spirals of beauty,"
 Shoots forth its fair boughs from the minus stove-door,
 Which, stripped of their foliage, remind us of duty—
 As well as the poker that lies on the floor—
 The old oakon poker,
 The soot-covered poker,
 The dreaded old poker that lies on the floor.

Now ye who are blessed with dry wood and warm houses,
 With good solid comfort, as much as ye will,
 Pray try to improve the "cold comfort" that ours is,
 Or yours be the fate of "Poor Harry Gill";
 Draw up some good wood, and put on some new plaster,
 Stop up the wide cracks in the windows and door,
 Or, ye unthinking parents, we'll tell the next master
 To use the old poker that lies on the floor—
 The old oakon poker,
 The soot-covered poker,
 The terrible poker that lies on the floor.

* For the story of Goody Blake and Harry Gill, see Sanders' Fourth Reader.

EDUCATIONAL JOURNALS. Among the Laws for the regulation of the Public Schools, in Alleghany, Pa., is the following, "*It shall be the duty of each Teacher to take, at least, one Periodical devoted to education.*" In the absence of any such law in this section of the country, why will not the teachers of the Public Schools in Maine be a law to themselves!—*Common School Advocate.*

THINK. Thought engenders thought. Place one idea on paper—another will follow it, and still another, until you have written a page. You cannot fathom your mind. There is a well of thought there which has no bottom. The more you draw from it, the more clear and fruitful it will be. If you neglect to think yourself, and use other people's thoughts—giving them utterance only—you will never know what you are capable of. At first your ideas may come out in lumps—homely and shapeless—but no matter, time and perseverance will arrange and polish them. Learn to think, and you will soon learn to write—the more you think the better will you express your ideas.

Old boys have their playthings as well as young ones; the difference is only in the price.

For the School Journal.

Questions for the Curious.

The 'Question for the Curious' in the January number afforded me some amusement and occasioned some thought: and the solution most satisfactory to my mind is, that when the traveler would arrive at any part of Asia, Japan for instance, or should he meet with any vessel on the Pacific that had sailed from that quarter of the world, he would find it Tuesday with the inhabitants; and as it would be noon with him, it would be noon also with those he would meet. Because at noon on any day at London, all East of that meridian is reckoned afternoon, and all West afternoon; and the Sandwich Islands are reckoned West, their Christmas daycoming on the 26th of Dec. of our calender. And because if another man (B) had started from London at the same time that A had, and had traveled East at the same rate, it is clear that as B would be traveling against the sun and not with it, a night must intervene before he could possibly meet his fellow traveler A. The morning of the next day being Tuesday to B, while A continuing with the sun had encountered no night, it being Monday noon to him still, and whenever they should meet they would both be on the same meridian, viz. 180° E. or W. Longitude from London, but with the difference of one day in their reckoning.

If the above solution be deemed satisfactory to the Editors, they are at liberty to publish it; also

ANOTHER QUESTION FOR THE CURIOUS.

If the sun is never vertical to any part of the earth north of the tropic of Cancer, (23½° N. lat.) how is it that it can shine on the north side of a building that stands in N. lat. 45°? That is, more than 20° north of where the sun is vertical.

H. M.

Monkton, Feb. 1849.

Are they veins or arteries that we see, for instance, in the arm, near its exterior surface? and which way is the blood flowing?

If you retire to bed at nine in the evening, and rise at seven the next morning, how far, during that time, have you been carried by the diurnal, and how far by the annual revolution of the earth?

Cut a couple of cards each into a circle of about two inches in diameter. Perforate one of these at the centre, and fix it on the top of a tube, say a common quill. Make the other card ever so little concave, and place it over the first, the orifice of the tube being thus directly under, and almost in contact with the upper card. Now try to blow off the upper card. What's the reason you can't do it?

Why will the exterior surface of a tumbler be covered with moisture, when filled with cold water on a hot summer's day, and where does it come from?

If an increase of temperature increases the volume of bodies, or makes them lighter, and a diminution of temperature diminishes it, or makes them heavier, bulk for bulk, why will ice float upon the surface of water?—*Scholar's Leaf.*

THE AGRICULTURIST.

Manures.

We have thought that no better service could be done to our agricultural readers just now, than to secure their attention to the subject of manures. We have accordingly copied sketches of the discussions at the Massachusetts Legislative Agricultural Meetings, in which will be found many valuable suggestions from men of science and experience.

The point that is prominent throughout the discussion is the importance, the absolute necessity, of a plentiful supply of manure, to all successful farming. It has been a thousand times said that our farmers spread their manure and labor over too many acres; but few act as if they believed it. It is time for every farmer practically to determine for himself whether the best manured and best cultivated crop is not the most profitable, and whether those fields from which he gets only 23 bushels, or less, of corn, and one hundred bushels of potatoes, to the acre, &c., are not in fact an expense to him.

True, it requires more capital and labor to cultivate and manure well, than to do both slightly. But it requires no more to raise 60 bushels of corn on one acre in the former way, than to raise it on two acres in the latter; and if one has more land under cultivation than he has capital for, he had better sell part of it, or give it up for a wood crop for his children.

Mr. Huxtable, near Shaftesbury, England, by attention to manure and a liberal use of capital, changed the whole character of a farm in only three years. The farm is about 95 acres. About one half is in wheat annually, producing about 40 bushels to the acre on an average. When he took it, it was a dairy farm with only 10 acres arable, carrying 14 dairy cows, growing 48 bushels of wheat and 40 bushels of beans, and employing three or four hands. It now produces 1,600 bushels of wheat yearly; fattens 40 head of cattle (including calves,) 100 sheep, and 80 pigs. The proprietor now has large heaps of manure which he hardly knows what to do with. One of the Massachusetts farmers, at the meetings referred to, remarked that any farmer might have as much manure as he could use, from his own resources.

Another remark relates to the manner of applying manure. No one advocated the use of green yard manure; all agreed that it should be composted.—None (or with the exception of a single gentleman who thought it better to plow in manure on sandy soils) were in favor of burying manure to any considerable depth; all would have it used as a top dressing, or only buried an inch or two by the harrow.—This conflicts so directly with views that have been common and practices that have been recommended in agricultural books and papers, that the unanimity of the gentlemen must be regarded as a little remarkable. Careful observers may remember facts which confirm the recommendation to leave the manure on or very near the surface.

For instance. If you scatter straw on grass land, it will produce an effect very much beyond what can result from any nutritive matter in the straw itself.—

A writer in the Boston Cultivator says: "I some time since met a Philadelphia Nurseryman, to whom I said, 'I want your testimony in favor of top-dressing;' to which he replied, 'You have it, you know that I advocate and practise it;' and so I witnessed, when, on a visit to his nurseries, I saw rotten dung placed on his rose and other flower beds, to the thickness of about a couple of inches, without the adoption of any means to prevent the escape of ammonia, or of fixing it; or the least idea of any loss from evaporation, the washing down by the rain or dew of the carbonic gas to the roots, being about all that was expected or desired."

Grant Thorborn's crop of China Tree Corn, the story of which gave it such a currency at the time, was finished, as to cultivation, by a liberal top-dressing of *log manure* put on just as the ears were forming. This made the ears so long and so well filled out, the end of every cob, almost, being covered, even to the crown kernel. Most of the premium crops of corn in this and other States are raised with a dressing of compost manure, put on the land just before planting, and covered only with the harrow. Observe, it is generally *compost*; green yard manure applied in the same way, especially if full of straw, is troublesome and otherwise objectionable. See also the article on another page on the fertilizing effects of shade.

Massachusetts Agricultural Meetings.

SECOND MEETING.

BOSTON, Jan. 23, 1849.

Subject—MANURES.

The President commenced the discussion by remarking, that the subject was one of vital importance to the farmer and horticulturist. There was no such thing as an inexhaustible soil; the richest prairies of the West, will by continued cropping, become unproductive. Then how necessary for us, of New England, to procure those substances to apply to our lands to keep up, and to increase their fertility. The best manure he had used, was a compost of muck, ashes and crushed bones. The ashes and bones were previously mixed in a damp state, and fermentation ensued; then this was mixed with the muck, and another fermentation took place. This manure cost about \$4.50 per cord. The past two years he had added stable manure and pulverized charcoal; the charcoal fixed the ammonia, and prevented its escape; fresh burned charcoal will absorb 90 times its bulk of carbonate of ammonia.

This kind of compost Mr. W. had found most valuable for all manuring purposes, and particularly for fruit, and trees in the nurseries; in proof of which, he exhibited cuttings of nursery trees, received last spring from Liverpool, and not transplanted into his nursery till June, which had made a growth of 4 feet. He thought charcoal a valuable addition to manure heaps and composts. Mr. Pell, of New York, has given an account of raising about eighty bushels of wheat per acre, upon which he sowed 50 bushels of charcoal dust, and also cited numerous instances in proof of the value of charcoal for manures.

Mr. Teschemacher remarked, that the subject of manures was of vast consequence. It required much judgment in the right application of manures in regard to the crop to which it was to be applied; the kind of manure, and the soil; all these should be taken into consideration by the farmer. Different crops require different manures. Clover requires sulphur and lime; tobacco, potash; wheat, phosphate of lime, &c. &c. The turnip crop in England is one of great importance; the size and quality of the turnip has been greatly increased in that country by the use of soluble phosphate of lime. Analysis teaches us what the various crops take from the soil; these substances can be replaced, but an important question arises—what ingredients put the most bone and muscle on the animal? "This question has been answered by Liebig in his lately published work ('Chemistry of Food.')

We knew, before Liebig was born, what bones were made of; but his last work explains the importance and action of the alkaline phosphates in the animal economy. Manures, containing a large amount of phosphate and ammonia, produce grain or corn crops, much more valuable for feeding purposes, than those raised by manures containing little or none. This difference sometimes amounts to 30 per cent. The nature of soils is now understood, and the constituents of a good soil are known: Silica, potash, &c. Clay contains some potash, and is a good substitute for fixing the ammonia in compost heaps. Charcoal is not to be always obtained, but clay is generally to be had by farmers; it is a good application for light lands. He hoped the day was not far distant, when farmers would better understand the nature of their soils, manures, &c., so as, actually, to teach the scientific scholar.

The quality of the manure effects the value of the seed. In the Isle of Thanet, in the river Thames, the farmers make compost heaps of clayey loam, rock weed and manure. The clay contains iron and potash, the sea-weed, soda and phosphates, the manure, ammonia. The wheat, having in the compost all the ingredients necessary, is fine and plump, and is sold all over the country for seed. Mr. T. was of the opinion that well rotted manures were far better than if applied green. He remarked, he had learned something from the leaves of *that book* which he had turned over with his *spade*.

Mr. Bartlett, of the Cultivator, read a paper, on the importance to the farmer, of the urine of his cattle for manuring purposes. He had very lately, by the kindness of Prof. Horsford, been favored with the result of an analysis of the urine and the fecal matter of animals, by which, according to Mr. Fleitman, of the Geissen Laboratory, it was found, that the inorganic constituents, in the two kinds of excretions, stood as 13 to 23 to each other; or in other words, that the urine was several times more valuable, or richer in inorganic salts, than the fecal matter. This fact unriddles all mystery, about the superiority of the Chinese and Flemish farming, over that of some other countries.

Mr. Brooks. Charcoal fixes the ammonia, but what kind of Soil is it best adapted to. Charcoal is

not to be had in all places. Will not plaster of Paris or salt fix it? Mr. Teschemacher said, plaster would fix the ammonia; salt, perhaps, might answer, but there might be danger of using too much salt. Mr. Brooks said, ashes were of no use on clayey lands. He had found 16 loads of rotted manure from his barn cellar, better than 24 loads of green manure. He plows in 16 loads of manure per acre, and then, instead of manuring in the hill for corn as formerly, he applies a handful of manure about the hill when hoeing the corn; in this way, 4 loads of manure give as good a crop, as 16 formerly did, when put in the hill.

Hon. J. C. Gray said, he makes free use of ground gypsum about his stables; it has the effect of removing the disagreeable smell, and prevents the escape of the ammonia. Manures should have muck or loam mixed with them, to prevent excessive fermentation. If not properly regulated, the manure is liable to become fireproofed, and suffer great loss. He thought it most profitable to compost manures, than to apply them green. He should like, however, to hear the subject of mineral manures discussed. Everybody knew, that our common manures increased the amount of crops when judiciously applied. In Pennsylvania, they use immense quantities of lime with the best results; in other places, plaster of Paris operates well. 'Tis believed generally, that neither of these act favorably, in the vicinity of Boston. He would like to know the reason of this difference. Mr. G., also made some valuable remarks which we are obliged to omit, for want of room. Wm. Parker, Esq., thought farmers too often suffered loss, by exposing their manures to the rains, snows and *freczings* of the winter. He made large quantities of manure from the waste alkaline liquor of his paper-mill, and the ashes of 200 cords of peat annually burned in his mill; these he mixed with the manures of horses, and the *sand* from a *bank* that never failed to discount. He had made great improvements on his farm; he now cuts 50 tons of hay, where he cut but one, a few years ago.

Further remarks were made by Messrs. Leonard, Lt. Gov. Reed, Brooks, Teschemacher, and others; and we fully coincide with the remarks of Gov. Reed, "that it was a most interesting and important discussion."

THIRD MEETING.

Subject--MANURES, continued from last meeting.

The President opened the discussion by remarking that charcoal, which he spoke of the last evening, was not of itself a manure, but a fixer, or retainer of the ammonia generated in the compost heap; clay had a similar effect. Ammonia also falls in the rain and the snow; this is absorbed by charcoal, and is kept for the use of the growing plants, as the charcoal will yield it up to the roots of the plants as needed. He gave some account of the successful application of charcoal to land sown with wheat, in Western New York; where 50 bushels of pulverized coal spread per acre, the yield was, on several large fields, 25 bushels of wheat per acre; where none was used on

similar lands the yield was only from 3 to 5 bushels per acre.

The other evening, Mr. Buckminster, of the Ploughman, doubted the statement that he made, in which it was said, Mr. Pell raised 80 bushels of wheat per acre, as 26 was the average crop in England. Mr. Colman states, in his travels in England, that 66½, 70, 80 bushels of wheat per acre have been raised, and in one instance 90½ bushels per acre.

Hon. B. V. French, of Braintree, remarked that he would give his views, and the result of his observations on farming. Without manure, high tillage, and thorough pulverization of the soil, farming gave poor returns. An eminent Roman, on being asked in what consisted good farming, replied ploughing—ploughing—manuring. The improved cast-iron ploughs enable us to work and pulverize the soil much better than formerly. Thorough working and hoeing the ground is a partial substitute for manure, as has been proved in the raising of carrots, by sowing one plot of ground manured, another without, the last hoed every day, in which the crop was as good. But which cost the most, the manure or the extra hoeing? That is a question which has not been answered. We hear of great crops being raised—but we do not get the cost of producing them. Economy is a branch of farming that needs studying, as well as some others. In Germany, they keep an account of the crops raised upon the farms; they can tell how much stock they can feed, how much land they can manure, and nearly what the amount of crops will be. We have not yet arrived at this accurate way of managing. But the farmer should study economy, and save every thing of a fertilizing nature within his reach. Lime is not good to mix with manure. Plaster of Paris does no good on land so near the seashore where cattle require no salt. I have an abundance of muck or peat; cut it up in the winter, when frozen, and draw it on to up-land; and after being acted upon by the frost, &c., it becomes light, and makes a good absorbent for the drainings of any manure, the urine, &c. Of itself, or applied alone, it is worthless, except for raising sorrel, but put in the hog and barn yards, barn cellar, &c., and by being mixed and shovelled over it makes a large quantity of first-rate manure. Had used guano for several years; the result has been unsatisfactory; we want more knowledge upon this subject. A nephew sent me a barrel of the genuine guano from Peru, but it did not exhibit any very striking results when applied to my crops. Had been successful in raising the Norfolk turnip, not costing over 10 cents per bushel. Manure used, crushed bone from Mr. Ward's mill, Roxbury.

Mr. Teschemacher remarked, the other evening we considered the great storehouse of charcoal, peat, decaying vegetable matter, potash, and the other salts, that make a good compost. He would now begin with ammonia. It is the great promoter of healthy, green leaves; these, exposed to the light and atmosphere, were the manufacturers of the sugar, starch, gum, &c., of plants; these changes are effected in the light, but yet you may have all the ammonia in the world, but without the phosphates, and

other inorganic salts that enter into the composition of grain, you can have no perfect seed. Ammonia will give long-jointed plants; the phosphates of lime, soda, potash, magnesia, &c., are indispensable to the growth of grain. Clay is a useful application to sandy soils, as it has a chemical and a physical effect. All vegetable matters in the compost heap become carbonized, or of the nature of charcoal, and serve to retain the ammonia. It has been ascertained, in Liebig's Laboratory, that there are from six to eight thousand pounds of ammonia in an acre of soil twelve inches deep; this is brought to the earth in every rain and snow, and some of it rises again into the atmosphere. Mr. Bartlett inquired if this amount was annually brought down by the rains? Mr. T. replied that it originally was; but it was fixed in the soil by clay, charcoal, decaying vegetable matter, &c.; that it descends in rainy weather, and rises in fair.

Mr. C. Newhall, of Dorchester, gave a good dissertation on the manufacture and application of manures; as he read his remarks from paper, we hope he will furnish them for publication. He said for grass lands he had used a compost of ashes, bone and muck, with as good results, as from the same quantity of manure, and at a much cheaper rate.

The President, Mr. Cole, Mr. Bartlett, and some others made remarks, as also Hon. Mr. Brooks, of Princeton.—*Boston Cultivator*.

FOURTH MEETING.

At the meeting on Tuesday evening at the State House, the discussion of the subject of *Manures* was continued. The President, Hon. Marshall P. Wilder, in opening the discussion, said it had been shown that the immense waste of fertilizing elements which have for ages been dissipated in the atmosphere, or washed out by heavy rains, can be wholly retained for the uses of vegetation. For this purpose certain substances which have been called "*store houses*," may be brought into action, such as plaster, &c., but practice seems to have indicated the superior value of charcoal and clay for this purpose.

Mr. Teschemacher made some interesting remarks respecting the practical application of science to agriculture. As to the comparative value of plaster and charcoal, he said that plaster may be, and is in some cases, but not in all, a manure; but by the absorption of ammonia it becomes sulphate of ammonia and lime. One hundred pounds of sulphate of ammonia contains about sixty pounds sulphuric acid—rather dangerous to vegetation—about twenty-six pounds ammonia, and fourteen pounds water. Now plaster may be good, and certainly is, to absorb noxious effluvia in stables, but as an absorbent of ammonia I think it far inferior to charcoal or clay. Our President has cited a case from Sandusky, Ohio, than which nothing can be more definite, the application of charcoal to a great number of adjoining acres: where the charcoal was applied alone the result was twenty to twenty-five bushels wheat; where it was not applied, three to five bushels.

Mr. T. further said, if there was one thing he desired to see more than another while he lived, it was

the definite experiment of agricultural schools and experimental farms throughout this vast and flourishing agricultural country. What was the reason, he asked, why our youth pant after commerce or the learned professions? It is because they require the exercise of the utmost energy of the mind, and this exercise is precisely what the youth demands; and the want of this exercise drives them into all kinds of foolish excesses, for this excitement of mind is invincibly strong. Now is it not possible to divert these energies of the mind to the successful pursuit of agriculture? Yes, but only by a previous education of the first order. Young men often consider a farmer as nothing more than a mere machine—a plow, an ox, a cart, or a hoe, with nothing to do but what his father did before him—and as long as these ideas last, so long will the best of our agricultural population flock to the cities, and many a fine mind be lost.

Mr. Buckminster remarked that it was important we should have something on our lands that would hold manure. If we have clay pits on our farms we can improve sandy lands so that they shall be made better and more permanent. It has been affirmed that charcoal does not wear away. It wastes, it rots in the ground; but clay is permanent and will last as long as sand does; the only difficulty with many farmers is how to get it. He considers the best soil to be that which is composed of 75 per cent. of clay and 25 per cent. of sand. This, of course, is without any consideration of fertilizing substances.

Mr. Leonard of Norton, said he had used charcoal on his land with good results for more than forty years; being in the habit of gathering up the residuum of his coal pit, sand mixing it with his barn manure. He had used muck, also, on sandy soil, to great advantage. Leaves, weeds, rushes—everything that would decay, was valuable for manure. He had found swamp mud the best application for a potatoe crop that he ever tried: the produce is not so great as with barn-yard manure, but the quality of the root so produced is excellent, and the abounding advantage is that the potatoe fields, so manured, *are not liable to rot*.

The President here read a communication from Joseph Breck, Esq., on the subject of bone manure, [see last Chronicle] and his experience in using vitriolized bones applied to fruit trees. Mr. Wilder added that four bushels of vitriolized bones,—*super phosphate of lime*,—would have more effect and produce a better turnip crop in England, than sixteen bushels of unprepared bones.

Mr. Walker, President of Mass. Horticultural Society, said he had used clay, ashes, peat, meadow muck, street sweepings, charcoal and virgin soil, as manure; and the last with the very best results.—This soil he obtained from the sides of stone walls, and wherever the plough had not been to disturb the earth for a succession of years. He preferred clay to charcoal.

He made a valuable compost of manure thus: He first spread 12 or 15 inches of sand on the surface of the ground, of the size of his intended heap; he then placed on this, a layer of green manure from his hog

yard, which he levelled off; on this, he placed a layer of virgin soil, or charcoal; on this, he placed successive layers of sand, manure, virgin soil, charcoal, and so on, until he had raised his heap 6 or 7 feet high; he then covered it up with loam and clay, covering the top with clay in a conical form, in order to shed the rain. This he allowed to stand until the succeeding autumn—a year; he then mixed it up together thoroughly, and it was ready for use.

Mr. Mason, of Medway detailed his experience of the beneficial effects of charcoal on grass ground.—nine years ago, he burned ten coalpits on about 1-2 an acre of land; the top soil being almost entirely removed, in order to cover the pits. After taking out the coal, and selling \$10 worth of the inner coal, he spread the residue, with the soil intermixed, evenly over the surface of the field, and sowed it down to grass. It did not catch well, and was light the first year, but improved the next year, and had borne good grass ever since, though this year—the ninth since it was laid down—he thought it not quite equal to former years.

Mr. Parker, of Sudbury, spoke of the importance of saving all refuse ley. Mixed with loam, it proved a most excellent manure, and yet, he supposed that \$50,000 worth of ley was annually wasted in Massachusetts—i. e. what would be worth that sum for manure. No animal substance should be wasted; it was all valuable for manure.

Mr. Merriam, of Tewksbury, said that he was long since convinced of the importance of liquid manure, by the experiment of Arthur Young, who applied the solid manure from his barn to one peice of ground, and the urine from the same source, to another piece of ground; and found that the effects of the urine continued longer to be felt by the land than those of the solid excrement.

Mr. Brooks, of Princeton, offered some remarks on the value of green crops—clover especially—ploughed in as a manure. Without any other manure, good crops of grass and rye could thus be raised. Grass did not exhaust a soil; because the grasses—especially the clovers—derived a very considerable amount of their nourishment from the atmosphere.

Mr. B. said he could farm in Massachusetts and make more money upon plain, common sense farming for twenty years consecutively, than in any other business. Alluding to a remark that we cannot compete with the West, he said he could make more money at agriculture in Massachusetts than an Ohio farmer can; and if he raises more corn to the acre than we can, we can make more money from a bushel than he can. It has been urged that the cost of manure is too great, and that manure is scarce. The only trouble we need have in this matter is, that we can, if we manage right, get too much manure.

Mr. Brigham, of Westboro', had long been impressed with the importance of saving all the liquid manure. For this purpose he bedded his cattle with sand, and uniformly turned them into the barn nights. He had not, for eight years, suffered them to lie out doors.

Drive thy business, or it will drive thee.

The Fertilizing Effects of Shade on Manures.

It is a well known fact that the earth is capable of being converted into the best manure. If densely shaded, it will undergo chemical changes, apparently similar to those which vegetable and animal matters do when they are converted into manure; namely, it is changed in color, consistence, and fertilizing qualities. This fertilized earth is known as vegetable mould, or virgin earth, to be the best of all manures. It has hitherto been considered the residue of vegetable decomposition. Vegetable matters upon the earth's surface, exposed to a free circulation of air, appear to be decomposed by a different chemical process, termed moultering, which forms a trifling carbonized residue, destitute of fertilizing qualities. And this is the case also when ploughed under and deprived of contact with the atmosphere. Unless they be previously saturated with water, or lime be added, they do not undergo fermentation, but, by moultering, become useless, if not pernicious, to after vegetation.

The astonishing fertilizing effect of vegetable matters, when thickly covering the surface of the earth for a length of time, cannot be accounted for by their decomposition, for the quantity of the residue of clover, leaves or straw, would not be sufficient, even if it were always equal in virtue to the best Peruvian guano. Straw spread thickly upon the poorest land—"land completely exhausted of alkalis"—will enrich it by the time it is decomposed; ten times the quantity ploughed under will produce no perceptible benefit. If the manure of straw be owing to the six per cent. of phosphate of lime which it contains, why is it that sixty per cent. placed in the earth imparts no fertility to it? That the fertility of the earth is not attributable to the decomposition of the straw, is proved by the fact, that any substance incapable of decomposition will produce precisely the same effect. The wonderful fertilizing effect of all substances covering the surface of the earth for some time, is to be attributed to shade, and shade only; and that the degree of fertility imparted to soil may always be estimated by the density and duration of the shade. That shade is a most powerful and efficient agent, is exemplified by the rapid destruction of the timbers and floors of buildings without cellars, when the precaution of preserving ventilation beneath has been neglected. It can be most profitably employed by the farmer in fertilizing the surface of the earth, for lands densely shaded one year with any substance whatever, will always prove to be more durably enriched than lands well manured. Any number of acres may be rendered productive by it (without labor or expense) in as short a time as it usually takes to prepare manure and apply it to a few acres. No method which has hitherto been suggested for the renovation of large tracts of worn-out lands is so practicable, cheap and effective.—*Exchange.*

FARMERS' MEETING AT HANOVER, N. H. We learn from the Granite State Whig, that farmers and other gentlemen friendly to improvement of Hanover, Lyme, and Lebanon, lately met in Hanover, for the

purpose of discussing various subjects relating to agriculture. Aas Huntington, Esq., was chosen chairman. S. Flint, Esq., of Lyme, read an essay on feeding stock, after which the various points in the discourse were discussed. Other gentlemen were appointed to deliver essays at future meetings. This is but an instance of thousands of cases of the kind which should occur in the country, and which will take place when farmers are awakened to the importance of association and combined action, in effecting improvements in their profession.

Gardens in the Vicinity of London.

"Rockaway," one of the London correspondents of the New York *Commercial Advertiser*, gives the following account of the kitchen and fruit gardens in the vicinity of the great metropolis: "The kitchen gardens for the supply of vegetables, in the immediate vicinity of the metropolis, are estimated at twelve thousand acres, about three thousand of which are wholly cultivated by the spade. Shortly after Christmas, radishes, spinach, onions, and all other seed crops are sown; and in February the same ground is planted with cauliflowers from the frame, as thick as if no other crop then had possession of the ground.—The radishes, &c., are sent very early to market, and when the cauliflowers are sufficiently advanced to be earthed up, sugar-loaf cabbages are planted.—When these are marketed, the stalks are taken up, and the ground cleared and planted with endive and celery. The average produce of these gardens is supposed to amount to about £200 annually per acre. The annual produce of all the vegetable markets is estimated to be at least £650,000. The fruit gardens of Middlesex, exclusive of those attached to private houses, are presumed to occupy from three to four thousand acres, principally situated in the vicinity of Kensington, Hammersmith, Brentford, Isleworth, and Twickenham. They furnish partial employment, according to the advancement of the season, to about forty persons per acre—the produce of whose labor amounts to about £300,000 annually; and to this another £100,000 may be added for the purchase of the fruit sent to the metropolis from the surrounding counties. The fruit gardens have what is termed an upper and under crop growing on the same ground at one time. The upper crop consists of apples, pears, plums, walnuts, &c., and the under crop of raspberries, currants, strawberries, and all such fruits as are known to sustain the drip of the trees above them with the least injury. Many of these gardens have walls completely covered with wall-fruit, such as nectarines, peaches, apricots, plums, &c. In order to increase the quantity of shelter and warmth in the autumn, they raise earthen banks about three feet high, laid to a slope of about forty-five degrees to the sun; on these slopes they plant endive in September; and near the bottom of them, from October to Christmas, they drill a row of peas. Besides the quantity of fruits raised from these gardens, the London markets receive additional supplies from those of Surrey, and much is also brought from Kent, Essex, Berks, and other counties."

Bones and Sulphuric Acid.

Boston, February 6, 1849.

M. Wilder, Esq. Dear Sir, The subject of discussion this evening, in the Legislative Agricultural Society, is one of deep interest to all who are engaged in the cultivation of the soil. As I cannot conveniently be present, I beg leave to make a few statements in relation to Bones and Sulphuric Acid, as a manure.

Having read various statements in English Agricultural papers concerning the economy and value of these substances for manure, I was induced to experiment with them last season, although I was in comparative ignorance as to the best mode of combining the bone and sulphuric acid, or oil of vitrol, as it is the more generally called.

The bone is commonly sold by the barrel, of four bushels each; but how four bushels are put in a barrel is probably best known to those who pack and sell it. The price varies, according to the quality and where delivered, \$1 25 to \$2 per barrel. The sulphuric acid can be purchased, by the single carboy of about 175 lbs, at \$2 75 to \$3 per hundred pounds, or \$25 per ton.

The bone that I used was from a button factory, and consisted of saw dust, borings, and small pieces, and cost \$1 50 per barrel.

I took six barrels of the bone, and having laid a few inches of the loam upon the ground, it was spread out in a dishing form and thoroughly wet; it was then brought into a compact conical shape, and left a few days until the heat in the pile became so great that the hand, when thrust into it, could hardly endure it. The heap was then spread out as before in a rounded form, about six or seven feet in diameter, dished in the middle, so as to retain the acid and water when applied, and the loam brought round the edge thereof. One carboy of 175 lbs. was mixed with about the same quantity of water as it was poured into the basin. A violent commotion immediately took place, like the slacking of lime.

Great caution in using and applying the acid is necessary, as it burns whenever it touches; a strong pole and an old long handled shovel were used to mix the boiling mass. In the course of half an hour, the effervescence passed away, and a portion of the bones were converted into paste; the combination was then made into a compact heap, and covered over with loam; after laying in this state a few days it was shoveled over and mixed with loam and coal ashes; it was then fit for use. I should say the loam and ashes were added in about equal proportion to the vitriolized bone. Now as to the quantity applied to the various trees, plants, and vegetables—will be the most difficult part of my story. I can only say that the effects of the manure to some of the crops was highly satisfactory and extraordinary.

For early peas, beans, corn, &c., it was sparingly scattered along the drills without other manure, with good success. The most remarkable effects were noticed to newly imported pear and other trees and shrubs. Trees, when they arrive from Europe, suffer much from the long voyage and exposure, and when opened, the fibres are found to be decayed, the

main roots only remaining sound, and then often much broken and damaged. This was the state of the trees planted with the vitriolized bone. The preparation of the ground for the trees was as follows:—Trenches a foot and half deep, and about the same width, were opened; the yellow sub-soil loam being thrown between the trenches, and the surface substituted for it in the bottom, and nearly filling the same. A light manuring of compost was added, and about two quarts of the vitriolized bone compost to the rod scattered in the trenches, which, as the trees were planted, was well mixed with the other manure and soil. The result was, that in autumn, when some of the trees were taken up, for sale, the roots had pushed out a great profusion of fibres, that had reached out in every direction to find the bone, and had to all appearance encompassed every particle with the numerous little feeders, from which a large amount of nourishment had been drawn, for the future growth and development of the trees. The trees had not made an extraordinary growth in length, but fruit buds of the most vigorous appearance, and shoots of great promise, gave indications of the power of the manure.

On a row of Fastolf Raspberry plants, imported last Spring, the vitriolized bone was used without other manure, with the same striking effect. The plants were so dry when planted, that I doubted whether one in ten would live; but hardly a plant died, and most of them bore fruit.

In removing some of them in Autumn, I found the same profusion and vigor of fibre, that was noticed in the pear trees.

I regret that I had not made more particular observations as to the quantity applied, and many other particulars, that would enable me to make a more tangible statement, for the benefit of those who may wish to make an experiment with this manure.

I will only add, in conclusion, that I have never seen more satisfactory results from any manure applied to trees, than from this of vitriolized bone.

With much respect, your obt^d serv^t,

Jos. BRACK.

The Economy of Agriculture.

Liberality constitutes the economy of agriculture, and perhaps it is the solitary human occupation, to which the adage, "the more we give the more we shall receive," can be justly applied. Liberality to the earth in manuring and culture is the fountain of its bounty to us. Liberality to laborers and working animals is the fountain of their profit. Liberality to domestic brutes is the fountain of manure. The good work of a strong team causes a product beyond the band work of a week one after deducting the additional expense of feeding it; and it saves, moreover, half the labor of the driver. Liberality in warm houses, produces health, strength, and comfort; preserves the lives of a multitude of domestic animals; causes all animals to thrive on less food; and secures from damage all kinds of crops. And liberality in the utensils of husbandry, saves labor to a vast extent, by providing the proper tools for doing the work both well and expeditiously.

Foresight is another item in the economy of agriculture. It consists in preparing work for all weather, and in doing all work in proper weather, and at proper times. The climate of the United States makes the first easy, and the second less difficult than most countries. Ruinous violations of this important rule are yet frequent, from temper and impatience. Nothing is more common than a persistence in ploughing, making hay, cutting wheat and other works, when a small delay might have escaped a great loss, and the labor employed to destroy, would have been employed to save. Crops of all kinds, are often planted or sown at improper periods or unseasonably, in relation to the state of the weather, to their detriment or destruction, from the want of an arrangement of the work on a farm, calculated for doing every species of it precisely at the periods and in the seasons most likely to enhance the profit. —*Arator's Essays.*

AGRICULTURE AND WAR. Elihu Burritt, in a late communication from England, says there are 700,000 laborers who do all the agricultural work, and their average wages are ten shillings per head. Then all the agricultural labor bestowed upon England to make it what it was at the last harvest, cost £18,200,000. Now, then, let all who look with delight upon the country in time of golden harvest; let every one of the 700,000 laborers remember that England, this very year, appropriated £18,500,000 to the mere husbandry of war—for preparations for blasting, consuming, impoverishing war; that she paid more for training men, and instruments to reap down men on the battle field, than it would cost to till just such another England!

GRAPES IN CALIFORNIA. An old resident in California says:—"I possess a small vineyard of 1000 vines, occupying three acres of land, which produces me yearly \$1000. The produce of last season, however, (1847) exceeded \$1200. I had sold grapes to the amount of 4000 lbs, at 8 cents per lb., amounting to \$328. Manufactured 30 bbls. of wine, at \$25 per bbl., amounting to \$750, and 4 bbls. of brandy, at \$50 per bbl., amounting to \$200. The vines commence bearing the third year, and perfect on the fourth. A vineyard does not require more labor than a common cornfield and one man is capable of attending 500 vines, merely laboring three hours daily for eight months during the year."

Of all animals, of whatever kind, those with the smallest and cleanest bones are generally the best proportioned, and covered with the best and finest meat. They are the hardiest, the healthiest, and best feeders; able to bear the most fatigue while living, and worth the most per pound when dead.

RUTLAND COUNTY AGRICULTURAL SOCIETY. The Premium List of this Society for 1840 is distinguished for the prominence given to imported breeds of Cattle. The Durham, Devonshire, and Ayrshire

Breeds are referred to three different Committees, authorized to award 17 premiums each. Sheep are classified in a similar manner, but only the fine woolled; no attention being paid to mutton.

The self-taught American philosopher Rittenhouse, being, when a young man, employed as an agricultural laborer, used to draw geometrical diagrams on his plough, and study them as he turned up the furrow.

The Markets.

BRIGHTON MARKET—THURSDAY, Feb. 22.

At Market 625 Beef Cattle, 12 pairs Working Oxen, 1850 Sheep, and 220 Swine.

Prices—Beef Cattle—Extra 6 75 a \$7; first quality 6 25 a 6 50; second 5 75 a \$6; third 5 5 a 5 50.

Working Oxen—Sales at 75, 88, 95, 120, and \$135.

Cows and Calves—Sales at 24, 28, 35, and \$40.

Sheep—Sales at 2 50, 3 50, \$5. A few cosset Wethers at \$8 each, and a few at \$11 each.

Swine—One lot to peddle, selected, 44c for sows, and 54c for barrows. At retail 5 and 6c.

BOSTON, FEB. 22.

WOOL. Prices have still further advanced the past week, in consequence of the limited supply in market. Sales have been made quite freely at our quotations. The stock in New York and Philadelphia is as light, we understand, as in this market.

Prime Saxony Fleeces, washed, lb.	42	a	45	
American full blood,	"	37	a	40
do	"	35	a	37
do	"	32	a	35
do	"	28	a	30
Smyrna, washed,	"	16	a	23
do unwashed,	"	8	a	14
Bengasi, do	"	7	a	9
Buenos Ayres, unpicked,	"	6	a	14
Extra Northern pulled lamb,	"	38	a	40
Super do. do. do.	"	33	a	35
No. 1 do. do. do.	"	29	a	31
2 do. do. do.	"	23	a	25
3 do. do. do.	"	15	a	16

—*Courier.*

LIVERPOOL WOOL MARKET, Feb. 10. Market very firm. The colonial Wool sales are now going on, have been so far well attended by an unusually large number of buyers from the manufacturing districts, and by a few from the continent. The biddings are very brisk at an advance of 4d a 2d per lb. on prices realized at the previous sales.

FANEUIL HALL MARKET.

WHOLESALE.				SEED—RETAIL.			
Beef, fresh, lb.	7	a	14	Apples, barrel,	1 50	a	2 50
Mutton, 1st qual.	6	a	10	do. dried, lb.	0 00	a	0 00
2d " "	3	a	6	Beans, bush.,	1 50	a	1 75
Lamb, 4	a	8		Peas, bushel,	0 00	a	0 00
Veal, lb.,	8	a	10	Potatoes, barrel, 2	00	a	3 50
Pigs, roasting,	1 00	a	1 25	Common,	3 00	a	0 00
Chickens, lb.,	10	a	12	Onions, bush.,	75	a	1 00
Turkeys,	10	a	12	SEED—RETAIL.			
Geese, mongrel,	1 25	a	1 50	Clover North.lb.	12	a	13
Pigeons, dozen,	1 00	a	1 25	Southern,	8	a	9
Pork, per 100lb, 7	00	a	0 08	White Dutch,	20	a	25
Lard, best, pr. bbl.	7 50	a	8 00	Lucerne, or French,	33		33
Western, keg,	8 00	a	8 50	Herdsgrass, bush.	3 25	a	3 50
Butter, lump, lb.	20	a	25	Red Top, bush.	1 25	a	0 60
do. firkin, 18	a	22		Northern,	65	a	88 1/2
Cheese, new milk, 7 1/2	a	8		Southern,	65	a	88 1/2
do. four meal, 5	a	6		Orchard Grass,	—	a	2 00
Eggs, doz.	25	a	30	Fowl Meadow,	2 50	a	0 00

The Mountain Ash.

S. L. Goodale, Esq., of Saco, grafted a common mountain Ash with several varieties of Pears, in May 1846. The next year he exhibited six handsome, large sized Vicar of Winkfield Pears, grown on these grafts, at the Massachusetts Horticultural Society, and pronounced the handsomest specimens of that variety that had been exhibited for the season.

This season he writes his friend Little, that "the Pears which he raised this year on the same tree, were very fine flavored and of good size, more particularly the White Doyenne or St. Michael, and fair as a wax fruit. The tree stands in a cold and poor clay soil."

The above shows that the mountain Ash is valuable for Pear stocks. We notice several persons have grafted the Pear on the mountain Ash in this city.—*Bangor Whig.*

MILCH COWS AT WORK. In some parts of England, though very rarely, but in many parts of the Continent, and especially in Switzerland, the small farmers use their milch cows for work, thus getting a double advantage from them; and a milch cow, used tenderly, and treated liberally, may be worked from four to six hours a day without injury to her milk. This saving is a great circumstance. On large arable farms it may be calculated, that from a fourth to a third of the produce must be counted for the support, and equipments, and cost of the teams. The saving of this expense is a great affair; and this is accomplished on small holdings where cows are kept, which pay the expense of their keeping by their labor and their calf, or where, as in many cases, the whole cultivation is performed by human instead of brute labor—by the spade instead of the plough. I believe, therefore, it will be found, that in a fair comparison, the small farms are in fact more productive than the large ones; that they are managed at less comparative expense, and, in proportion leave more for human consumption.—*European Agriculture.*

Domestic Economy.

LEARN TO COOK WELL.

To do well whatever it becomes our duty to do at all, is an ambition sufficiently elevated for the highest and most gifted spirit. The care of the family will be the duty of the woman, till we are all translated to a higher sphere of existence,—and family care will always, as now, be made up of details, small in themselves, it is true, but in the aggregate, and in their connections, vastly important. We say, then, *learn to cook well.*

The health of the family depends upon it.

Good cookery does not consist in producing the highest seasoned dishes, nor such as foster a morbid appetite, but in preparing every dish well, however simply or common it may be. There are, for instance, families who never eat any good bread from one year to another, and have no idea in what it consists. Nor are meats cooked any better within their precincts. Those little, simple, and healthful delica-

cies, which the good housekeeper knows how to produce, are never seen there. Even a dish of potatoes cannot get themselves well boiled. A member of the family might as well fall sick among the Hottentots, as far as any proper nursing is concerned. These things ought not to be, nor is there any need of their existence, if the wife has any just notions of her obligations to herself and those about her.

The science of bread-making, of meat-boiling, stewing, roasting, and broiling, of vegetable cooking, and of preparing the multifarious small dishes of all sorts, which go to make pleasant the table, and all about it, are hers,—hers to understand and to practice. They are sciences too, quite as exalted in nature as are those which lie at the foundation of litigation, cloth-selling, implement-making, or wheat-growing. The woman who can cook well is an empress, to whom all that wait at her table will do unbought homage. Learn to cook well, fair friends.—*Prairie Farmer.*

VIRGINIA, OR EGG BREAD, is made with boiling water and some milk, half and half, or even less milk will do. To a quart of meal two or three eggs. Beat well and stir in a lump of butter or lard as big as an egg. Make the batter not stiffer than muffin batter, and bake in patty pans.

VIRGINIA CAKE is the same batter, but made thinner, and with rather less lard.

CORN MUFFINS. The same batter, mixed with cold water.

CORN MEAL RUSK. Six cupfulls of meal, four of wheat flour, two of molasses, 2 table spoonful of salerates,—mix and knead into dough, make it into two cakes, put it into tins, and bake three fourths of an hour.

PONE BREAD is mixed with warm water and salt, at night and baked next morning.—*Miss Leslie.*

COMFORTABLES—Should always be made of dark stuff, unless designed to be taken apart when washed. The lining should be as dark as the outside. If very nice, a piece of napkin muslin can be basted about the head where the breath would soil them.—*Ohio Cult.*

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy, - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " " - -	3 00
16 " " " " " - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for

THE SCHOOL JOURNAL, And Vermont Agriculturist.

Vol. II.

WINDSOR, VT., APRIL, 1849.

No. 12.

THE SCHOOL JOURNAL.

Reading.

We remember to have seen it stated in an account of the progress of the public schools in Cambridge, Mass., that no other means of improvement had been found so effectual as special attention paid to **READING**. Several gentlemen had interested themselves in the work; they labored for years, and in the end with the most gratifying success. But to nothing could they look back with more satisfaction in regard to its influence in bringing about the whole revolution, than the attention they had devoted to the elementary matter of **READING**.

To be able to read well is to possess a power and an accomplishment that few have learned duly to appreciate. What more delightful at the domestic fireside than the voice of a good reader? What accomplishment more commends a man in the pulpit or at the bar, than to be distinguished as a good reader? A good reader becomes, as a matter of course, a good speaker.

It is related of **LARNED**, that, when men thronged at New Orleans to listen to his eloquence, he once read to a college friend, in a careless way, the sermon he was to preach the next day. The friend remonstrated,—assuring him it would injure his reputation and his usefulness to preach it. The sermon was preached, however; and the friend who had thought so little of it, was himself overwhelmed by the preacher's surpassing eloquence. It was the difference in the reading.

Mrs. BUTLER has lately been reading *Shakspeare* in Boston—not acting, but merely sitting down at a desk and *reading*, to cultivated and delighted audiences, who have paid her for the service some \$300 for each evening.

It is not enough, therefore, for children to be taught to read fluently. The lessons in reading ought by no means to stop with that. We have been in schools where the older scholars appeared to think themselves above all the *reading* classes; and so seemed the teacher also to think. But it was because neither teachers nor scholars knew what good reading is, and how much may be done in a common school towards making effective readers of all.

Our readers must have noticed the remarks of **Mr. Tufts**, in his *Notes of Schools, on Reading Books*. In many schools the reading lessons are poorly adapted to their purpose. To make good readers, children should be exercised upon such lessons as they can

fully master. They should be able not only to understand, but to enter into the spirit of the lessons; and care should be taken from the outset to have every lesson read with spirit before the child leaves it.

While the child, for instance, is obliged still to spell out many of his words, he should by no means be permitted to spell through a sentence and then leave it. In that way he often forgets the beginning before he comes to the end, and knows not what he is about. Therefore however short the sentence may be, after the little fellow has spelt it through, let the teacher read it in a lively, natural tone, and teach him to repeat it in the same way. Act on the same principle till the child can read fluently. Never let a sentence pass without being read, or repeated after the teacher, in a natural, lively tone. In this way not only will the formation of bad habits be avoided, but the child's progress will be vastly more rapid. We have watched the effect of both methods, and speak with confidence. More than half the time of a child in learning to read, is often lost merely for want of this habit, from the very first, of understanding every sentence, and uttering it as a good reader would do.

It has been often said, but still without being much regarded, that it is better to have a single paragraph read well in a class than to go over many pages carelessly. To be read well, the lesson must be such as the reader can understand and enter into the spirit of. Such a book as *Porter's Rhetorical Reader*, though excellent in its place, is out of place in most district schools. It is not the most instructive and elegant specimens of writing that are always the best for reading exercises. Rather select those which are simple in their construction, and adapted to awaken some emotion—to produce a smile, or touch the heart. And exercise the pupil upon lessons, the words and meaning of which he has perfect command of.

Our object in these remarks is merely to direct the attention of teachers to the subject. It is one which most of them need to study as much as any in the whole circle of common school employments. It is one that will as richly reward well-directed labor as any other. Many fail to get more than half the meat out of the shell of an author's language, because they do not know how to read. They can pronounce the words and define them; but that is far short of what is necessary to get the full meaning of an author. A popular lecturer remarks that he cannot put his meaning on paper so as to have it fully understood; he must have the emphasis, the cadence, the

tone, &c., adapted to each sentence and paragraph. We have heard a familiar passage in the Bible so read as to bring out the meaning with a freshness and clearness that no commentary can attain to.

Our Third Volume

Will commence with the May number. Our friends are requested to send their orders early. Terms as follows :—

For a single copy, - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " - -	3 00
16 " " " " - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

IF Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for

Orders to be sent to BISHOP & TRACY, Windsor, Vermont.

REPORT OF THE STATE SUPERINTENDENT. The Report of the State Superintendent for 1848 has not yet reached us. An extract from the Report of one of the County Superintendents, on another page, is taken from it at second hand.

The School Journal for School Districts.

In Shaftsbury the School Journal has been ordered for two years for each School District. The order has been for the bound volumes, which are lodged in the District Clerk's office, and are of course accessible to any who may wish to read them, and especially to teachers.

In this way each successive teacher employed may obtain hints and instructions worth to the district a hundred fold the cost of the books. The greatest expense of schools is in the time of the scholars. Add to this the investment in the school house, the wages of the teachers, fires, books, stationery, &c. ; and the necessary expense of a district school will be found to amount to no inconsiderable sum. The large items of expense cannot be avoided.

In such a case it is the dictate of economy to spend any other small sums that may be necessary in order to make the most of the large sums. If a school costs necessarily fifty dollars for three months, economy demands that ten, twenty, or thirty dollars more should be added, if by that means the school can be made twice as useful. If the school can be made 10 per cent. better by expending \$5 more, it should certainly be done. Any one who has seriously considered the matter—any one who has read with attention the "Notes of Schools" in Windham County, must be convinced that the interests of a school district demand a liberal expenditure for the purpose of providing a good and well furnished house, a good teacher, and other ways and means for securing a really good school.

But we are making out an argument that would answer for a pretty large demand upon the district

treasury ; while our immediate object is only to suggest the appropriation of 25 cents a year for so useful an article as the School Journal. We have remaining a few copies of volumes 1 and 2, which we will sell to districts, done up in paper covers, at 25 cents each. Would it not be well for some public-spirited individual or individuals in the town, to send on the small sum necessary to purchase a copy for every district?

We have but a limited number of sets on hand, and the orders first received will have the first claims.

Teachers,

Who will send their orders soon, can be supplied with the first, second, and third volumes, or any two of them, at 25 cents each ; the first and second volumes done up in handsome paper covers.

This notice deserves, we think, the attention of *County and Town Superintendents*, who examine teachers. A leading characteristic of a good teacher is, the *spirit of improvement*—a zeal for the advancement of education generally, and especially an earnest endeavor to become personally better and better qualified, with every week's experience, for the high duties of the school room. Can one have enough of this spirit to deserve employment as a teacher, who yet hesitates to expend a trifling sum for a School Journal?

Many young women are employed as teachers, naturally well-disposed, and with every wish to do their whole duty, who yet, owing to the circumstances of their education, have not really come in contact with the spirit of improvement. They do not know how much they have to learn—they are not aware how much more successful they might be. Such need the aid of the examining superintendents. A few words, an earnest recommendation of the Journal, or of some other cheap work of the kind, something to awaken the desire and to fix the determination to know and to do more, might often benefit the candidate for life, and through her, the public.

Teachers would find it, we are sure, for their own advantage as well as do good to those around them, should they take pains to introduce the Journal where they are employed. An effort for such a purpose manifests a degree of public spirit which tends to secure respect and confidence. And parents, who can be induced to read the Journal will soon become more interested in the schools and be better prepared to sustain and aid a deserving teacher.

Village Schools.

The Town Superintendents of Burlington earnestly recommend a reorganization of the village schools. At present, their report is by no means flattering in regard to their efficiency. It is recommended that the children be classified according to age and acquirements, so as to place those of similar standing by themselves, as is done in Brattleboro, Woodstock, Windsor, &c. There can be no doubt of the expediency of such a classification. It is the only way in which District Schools in a large village can be made to answer their purpose to any tolerable extent.

In our own village, and we have understood it to be so to a greater or less extent elsewhere, the larger scholars, and especially the larger boys, fail to derive all the advantages from the system that they ought. They are too apt to cling to the old practice of attending school only in winter. Some are employed, it is true, during other parts of the year, in useful labor; but many have little to do, and instead of making rapid advances in study, are forming bad habits. It is a point to which parents and teachers should pay special attention. It should be an object to keep the schools as full as possible through the year. When a good school is provided at the public expense and for the public good, it is a duty to the public to make the best use of its advantages. It is squandering what is more precious than gold and diamonds, to let the springs, and summers, and autumns, of boys and girls, run to waste while opportunities for improvement are at their door, and paid for.

First Lessons with Children.

Speaking the other day with a friend—a teacher of much experience,—on early education, he referred us to an article that we had published some years ago in another paper, as having been of decided advantage to him in teaching his own children to read. He had not been able, and perhaps it was not best, to follow the example referred to very closely; but acting on its plan and in its spirit, the results were very gratifying.

With this testimony to its value we copy the article referred to here, confident that it deserves the attention of both parents and teachers. It is the account given by that remarkable woman, the mother of JOHN WESLEY, of the manner in which she taught her children to read.

Extract of a letter from Mrs. Wesley to her son John.

"None of them were taught to read till five years old, except Kezzy, in whose case I was overruled; and she was more years in learning than many of the rest had been months. The way of teaching was this: The day before a child began to learn, the house was set in order, every one's work appointed them, and a charge given, that none should come into the room from 9 till 12, or from 2 till 5, which you know were our school hours. One day was allowed the child, wherein to learn its letters; and each of them did in that time, know all its letters, great and small, except Molly and Nancy, who were a day and a half before they knew them perfectly; for which I then thought them dull; but since I have observed how long many children are in learning the horn book, I have changed my opinion. The reason why I thought them so then, was, because the rest learned so readily: and your brother Samuel who was the first child I ever taught, learned the alphabet in a few hours. He was 5 years old on the 10th of February; the next day he began to learn, and as soon as he knew the letters, began at the first chapter of Genesis. He was taught to spell the first verse, then to read it over, till he could read it off hand, without any hesitation. So on the second, till he took ten verses, for a lesson, which he quickly did. Easter fell low that year, and by Whitsuntide, he could read a chap-

ter very well; for he read continually, and had such a prodigious memory, that I cannot remember ever to have told him the same word twice. What was yet stranger, any word that he had learnt in his lesson, he knew, wherever he saw it, whether in his Bible, or any other book, by which means he learnt very soon to read an English author well.

"The same method was observed with them all. As soon as they knew the letters, they were put first to spell and read one line; then a verse; never leaving till perfect in their lesson, were it shorter or longer. So one or other continued reading at school time, without any intermission; and before we left school, each child read what he had learnt that morning; and ere we parted in the afternoon, what he had learnt that day.

"Every one was kept close to his business for the six hours of school; and it is almost incredible what a child may be taught in a quarter of a year, by a vigorous application, if it had but a tolerable capacity and good health. Every one of these, Kezzy excepted, could read better in three months, than most women can as long as they live."

The Dominion of the Soul.

Let us thank Heaven, too, that there are other standards of greatness besides vastness of territory; and other forms of wealth besides mineral deposits or agricultural exuberance. Though every hill were a Potosi, though every valley, like that of the Nile, were rank with fatness, yet might a nation be poor in the most desperate sense;—benighted in the darkness of barbarism, and judgment-stricken of Heaven for its sins. A State has local boundaries which it cannot rightfully transcend; but the realm of intelligence, the sphere of charity, the moral domain in which the soul can expand and expatiate, are illimitable,—vast and boundless as the omnipresence of the Being that created them. Worldly treasure is of that nature that rust may corrupt, or the moth destroy, or thieves steal; but even upon the earth, there are mental treasures which are unapproachable by fraud, impregnable to violence, and whose value does not perish, but is redoubled with the using. A State, then, is not necessarily fated to insignificance because its dimensions are narrow, nor doomed to obscurity and powerlessness because its numbers are few. Athens was small; yet low as were her moral aims, she lighted up the whole earth as a lamp lights up a temple. Judea was small; but her prophets and her teachers were, and will continue to be, the guides of the world. The narrow strip of half-cultivable land, that lies between her eastern and western boundaries, is not Massachusetts; but her noble and incorruptable men, her pure and exalted women, the children in all her schools, whose daily lessons are the preludes and rehearsals of the great duties of life, and the prophecies of future eminence—THESE ARE THE STATE.—*Mann's last Report.*

Mind what you run after! Never be content with a bubble that will burst, or firewood that will end in smoke or darkness.

Caledonia County Teachers Convention.

A Convention of Teachers, called by the County Superintendent, was held in Barnet, Feb. 17th.

Several important subjects were considered and Messrs. Abbot, Burnham, Case, Colby, Goodwillie, Hopkins, Hubbard, McArthur, Rix and Stevens, took part in the discussion.

From a sketch of the views presented, prepared by the Secretary, Mr. Rix, for the Caledonian, we copy the following:—

THE SPIRIT AND MOTIVES OF TEACHERS.

It is of great importance that teachers should do their work in a right spirit. They should not labor for money alone. "Every laborer is worthy of his hire;" let the teacher make a bargain as much to his pecuniary advantage as possible; there's little danger of its being too much so at present, and when once made, let him forget it, and throw his whole thought and effort and interest into his school. Mean to do well. Determine on it before hand; it is easier, indeed, to do poorly, but resist the temptation, be resolute and faithful, and look confidently for your reward. This is the best course both for the teacher and the school. The temptations are many and sometimes strong to vary from what good sense and duty dictate as best for the school and due to it, and to accommodate one's self, for the sake of peace or ease to what is wrong. But yield not. Do right—be wise in *how* you do it, but *do* right. The straight forward teacher will be found out and finally rewarded.

THE GOVERNMENT OF SCHOOLS—HOW CAN IT BE BEST SECURED?

One of the chief means of governing the school well, is high motives and a benevolent spirit in the teacher. As the teacher, so the pupil. *Good as well as evil is catching.* Conscience must be appealed to—great moral principles must be inculcated—no sectarianism—but virtue and piety.

The teacher must be calm and decided. No teacher can govern a school, who cannot govern himself.

"Neque enim potest exercitum continere imperator, qui seipsum non continet."

Avoid laying down too many *invariable* rules.

Here are three very good ones. 1st, order; 2nd, good order; 3rd, perfect order. There is a way to flatter a school into a kind of obedience; this is better than no government, but not the best. Discipline is necessary. We are citizens of a Republic that requires for its welfare a complete submission to its laws. There is danger, perhaps, of becoming too democratic—the step is easy from sovereign people to sovereign children; and from sovereignty to insubordination. Scholars, then, should learn to obey; without the rod, if they will, otherwise with it.—Spare it not, teacher, when you are fully persuaded that its use would be beneficial to the child; but beware that you never use it either *because* you are angry or *when* you are angry. Passion may produce temporary outward submission, but it will also produce lasting inward rebellion. Be conciliatory.—Love can subdue and command. Mean what you

say. Threaten not. Do not distrust; confide, and it will be returned with confidence.

Whispering can hardly be prevented at once; endeavor to do it by degrees, by forfeiture of privileges (which every teacher ought to establish) or by daily reports, &c. Be careful to seat your scholars rightly—not two rogues together, but one good and one bad, or one old and one young, on the same seat.

Children are ignorant, weak and young, and must be borne with. If partiality must be shown, show it by giving the extra attention to the poor, the backward, the dull.

METHODS OF AWAKENING AN INTEREST IN STUDY.

The teacher himself must be full of energy and ambition. He must lay before the school the nature and importance of education. Show them in its true light the relation which does, and ought to exist between himself and them. He must convince them that he would do them good. Let him strive also to awaken an interest among parents. Let parents and teachers visit each other often, and converse on the school and on the conduct, progress and prospects of the children. The attention of the scholar should be called to any advancement he has made. A smile, a word, a pat on the head may leave a lasting good effect. Be zealous. Do not feign it; there is no need that you should, think on your responsibility! Look over every night the work for the succeeding day and prepare for it, (can this be so well and punctually performed while boarding round?) and come before your classes fresh and ready. Vary the mode of presenting a subject, but not the subject, till it is so learned that the child will love it because he understands it.

BRANCHES THAT SHOULD BE TAUGHT IN OUR DISTRICT SCHOOLS.

Reading and spelling too much neglected, arithmetic also too much neglected. Grammar, as taught at present, is of but little practical use. Its principles can be learned sufficiently for a common school education from teachers, conversation, and reading.

Good manners and politeness as well as science, should be taught in district schools. Youth is the season of limberness. Grace and ease must be taught; awkwardness grows spontaneously. Politeness consists in a sound head and an honest heart, *properly expressed.*

The Bible should be read and its leading doctrines urged, daily.

There should be laid in the common school the foundation of a liberal self culture. This is the great object. And to accomplish it, let nothing be presented to the pupil but he may understand, and then see that he understands it.

PROPER METHODS OF TEACHING SPELLING, READING, ARITHMETIC, AND GRAMMAR.

Let spelling be taught at the same time with reading. Spelling books are not to be neglected. The latter mode is not to be used less, but the former more. Every syllable should be pronounced.

In reading let every letter be sounded, especially the consonants. Reading books are usually too hard; change them occasionally for easier; some of the es-

sier portions of the New Testament, for instance.

In arithmetic the reason should be given for each step, no matter how simple and evident it may be.—Questions are to be varied continually and repeated again and again; answers are to be given immediately. The fundamental rules should be dwelt upon.

There must be an earnestness and firmness of manner on the part of the teacher, a steady and mild eye, and nothing to disturb either himself or the class.—No questions to be asked during a recitation. Let every exercise be so conducted that the *thought* of the pupil may be clearly brought out and *expressed in his own words*. Teach him to tell what he knows, and he will soon know something to tell.

Extract from the Report of Superintendent for Windham County.

At the usual time in the Spring, I commenced my tour through the county, again to examine teachers, in connection with the Town Superintendents. Eighty-seven presented themselves for examination. Sixty-nine of these received full certificates of qualification for teaching school in the County. Eight received certificates with Orthography erased. Five received partial certificates. Two were licensed by Town Superintendents. Three received no certificate. The examination was conducted principally by writing, in accordance with the direction and suggestion of the State Superintendent. This mode of examination is, on the whole, more satisfactory than that formerly adopted. It gives the candidate more time to arrange his thoughts, and to shape his answers. It furnishes a permanent record of the questions put, and answers given, and thus affords the means of comparing one with another, and the qualifications of one year with those of another: and it also furnishes a better opportunity to judge of the qualifications of those examined, and to point out errors and defects in their answers.

I found in this, as in previous examinations, a great deficiency in Orthography, though much improvement had been made since the first examination under the present school law. The following list of words was pronounced to the teacher under examination, to test his skill in Orthography,—besiege, privilege, separate, noticeable, blamable, manageable, producing, robberies, donkeys, marriage, hoeing, cabbage, receive, believe, district, certifies. Though these are common and familiar words, yet every word was misspelled. It is, however, but just to say, that a large number of the candidates acquitted themselves honorably in this branch.

The plan of examining teachers, principally by writing, is well calculated to show defects that might not otherwise be discovered. For instance, one of the teachers examined last spring, wrote the name, Daniel Webster, in small letters, thus, *daniel webster*.

During the summer past, I have been engaged for several weeks in visiting schools. I have visited more or less in every town in the county. I have visited seventy-seven in all. Of these I should say that not more than ten were decidedly poor—that a dozen or so might be called middling, and that some of the rest

were good and others excellent, that is, according to our present standard.

Some very glaring defects in teachers were apparent, which might be remedied by a short stay at an Institute.

You will see by the Statistical Report that a few school houses have been erected in the county during the year. These have been constructed on improved plans. They are far more convenient and comfortable than their predecessors. The two now erecting, one in Wilmington, the other in Westminster, are each two stories high, and designed to accommodate two schools each. They are of good size, and will be finished in the best manner of country school houses. The intention of the people of the districts where these school houses are located is, to separate the pupils into two divisions, according to their ages or attainments, and thus give greater efficiency to their schools. The same thing might be done in several other places in the county; and would be, if the people understood their true interests.

Facts and Fancies.

It is a fact, that we need good schools; but to suppose we can have them without union, harmony, diligence and persevering effort is a fancy.

It is a fact, that every good teacher can "read, write, and cypher;" but to suppose a man to be a good teacher simply because he can do this, is a fancy.

It is a fact, that intelligent gentlemen and ladies are usually well and neatly dressed; but to suppose every well dressed person to be intelligent or genteel, is a fancy.

It is a fact, that many parents spend more time and money in dressing the bodies, than in cultivating the minds of their children; but to suppose such acting is for the real good of the child, or the interest of the country, is a fancy.

It is a fact, that of all forms of civil government, a Republican is most desirable; but to think that a Republican form of government can be maintained among an illiterate, uninformed people, is a fancy.

It is a fact, that every considerate man desires the benefits of a well ordered, quiet and peaceable society; but to suppose he has a right to these without contributing his proportionate part towards the promotion of good order, quietness and peace, is a fancy.

It is a fact, that many persons holding a large amount of property, object to the levying of a tax for the benefit of common schools; but that such will be compelled to pay either for the education or ignorance of many around them is no fancy. Property holders who refuse to interest themselves for the mental and moral improvement of the mass of the people, must, and will, suffer by their ignorance, and for one or two other, every man of property will have to be taxed.

It is a fact, that competent, faithful teachers, generally, are performing more work and for less money, than any other class of professional men; but the supposition that this is either fair or just, is a fancy.

It is a fact, that parents may, and do often neglect the education of their children; but to think that

those children will be none the worse for that neglect, is altogether a fancy.

Finally:—It is a fact, that some may suppose that we might as well be otherwise engaged as in writing so plainly of schools, school teachers, school commissioners, and parents, but if they suppose that we will shortly leave off, we beg leave to inform them that it is a fancy and nothing else.—S. W. S. Jour.

The Pilgrim Fathers—the Coming Ages.

How divinely wise were our Pilgrim Fathers, when they foresaw, that if they could give knowledge and virtue to their children, they gave them all things. Wonder and admiration seize us, as we reflect upon the vastness of the results which their wisdom wrought out from the scantiest of resources.—They have taught us the great lesson, how the fiercest elements obey, and how the most obdurate and intractable of nature's substances, bend and melt before the power of knowledge, and the fervors of a saintly heroism. Their deeds have taught us not only that the race is not to the swift, nor the battle to the strong; but they have taught us that the swiftness which shall win the honors of the goal, and the strength which shall triumph in the strife, are to be found in the soul and not in the limbs of man. But though, to this untitled, yet noblest ancestry, we are bound to pay the homage of our gratitude, and to accept their benefactions with a filial love; yet neither the complacency of enjoyment, or that of retrospection, is the frame of mind that best befits us. *We have our futurity, as they had theirs*:—a futurity rapidly hastening upon us,—a futurity, now fluid—ready, as clay in the hands of a potter, to be moulded into every form of beauty and excellence; but, so soon as it reaches our hands, so soon as it receives the impress of our plastic touch, whether this touch be for good or for evil, it is to be struck into the adamant of the unchanging and unchangeable Past. Into whose form and likeness shall we fashion this flowing futurity? Of Mammon? of Moloch! or of Jesus!

Clear, and more clear, out of the dimness of coming time, emerge, to the vision of faith, the myriad hosts of the generations that shall succeed us. These generations are to stand in our places, to be called by our names, and to accept the heritage of joy or woe, which we shall bequeath them. Shall they look back upon us with veneration for our wisdom and beneficent forecast, or with shame at our selfishness and degeneracy? Our ancestors were noble examples to us; shall we be ignoble examples to our posterity? They gave from their penury, and shall we withhold from our abundance? Let us not dishonor our lineage.—Let us remember that generosity is not to be measured by the largeness of the sum which a man may give, but by the smallness of the sum which remains to him after his gift. Let us remember that the fortunes of our children, and of their descendants, hang upon our fidelity, just as our fortunes were suspended upon the fidelity of our fathers. Deeds survive the doers.—In the highest and most philosophic sense, the asserted brevity of human life is a fiction. The act remains though the hand that wrought it may have perished.

And when our spirits shall have gone to their account, and the dust of our bodies shall be blown about by the winds, or mingled with the waves, the force which our life shall have impressed upon the machinery of things will continue its momentum, and work out its destiny upon the character and happiness of our descendants.—*Mann's last Report*

From Tracts for the People.

Self-Education.

1. BEGIN AT ONCE. This is all important. Here, as elsewhere, delays are dangerous. Not a moment need be lost. Strike while the iron is hot. Make hay while the sun shines. Do not put off till to-morrow, what can be done to day. Go to work, while you are in the humor for it; by neglect, the disposition may be lost. What I am recommending is not a toil, but a pleasure; therefore there is no excuse for lingering. Consider, if you had begun ten years ago, you would have been a learned man by this time; and if you are alive ten years hence, you will then be ripe in knowledge, by the observance of these rules.

"Lose this day loitering,—'twill be the same story To-morrow, and the next more dilatory;
Thus indecision brings its own delays,
And days are lost, lamenting over days.
Are you in earnest? Seize this very minute,
What you can do, or think you can begin it;
Boldness has genius, power, and magic, in it;
Only engage, and then the mind grows heated—
Begin it, and the work will be completed."

[GOETHE.]

2. REDEEM THE TIME FOR READING. Perhaps you think this impossible; but the busiest life has some pauses. There is an amusing incident related by Dr. Johnson, of a merchant's clerk, who once came to him, half crazed with some scrupulosity of conscience. "I asked him," said Johnson, "when he left the counting-house of an evening." "At seven o'clock, sir." "And when do you go to bed, sir?" "At twelve o'clock." "Then," replied I, "I have at least learned thus much by my new acquaintance—that five hours of the four-and-twenty unemployed are enough for a man to go mad in: so I would advise you, sir, to study algebra, if you are not an adept already in it; your head would get less muddy." When I see the large amount of time spent by some over the lowest sort of newspapers, I am convinced that the most industrious young men might obtain a few minutes a day for study; and it is astonishing how much can be learned in a few minutes a day. What cannot be done to-day, may be accomplished to-morrow. It is as true of time as of money—"Take care of the pence; the pounds will take care of themselves." Or, as Young more poetically expresses it, "Sands make the mountain, moments make the year."

All men of high attainments agree in saying that the more valuable part of every one's education, is that which he gives himself. In this there is high encouragement, to go on and prosper. The mental accomplishment which is fully within your reach will double your capacity for action. When Aristippus was asked, wherein a learned and unlearned man dif-

ferred, he replied, "Cast them both, naked, on a foreign shore, and you will see." Education will do for you, what sculpture does for the marble. Hence the famous saying of Socrates, "I marvel, that people should be willing to give so much for turning a stone into a man, and so little to prevent a man's turning into a stone." The best qualities of your nature become latent, where there has been no cultivation.

Spelling.

But the best way of spelling by word of mouth which we have ever known, is for the teacher to put out a word to a class, and then wait just long enough for each scholar to spell it mentally and then name a particular scholar to spell it orally. And the utility of this plan increases just in proportion to the number belonging to the class. It fixes the attention of every scholar, for not one of them knows but he shall be called upon to spell the word. It forbids all wandering, and betrays it if committed. If the class consist of twenty, twenty minds are at work, the moment the word is uttered by the teacher. In the ordinary way of putting out words to a class in rotation, if the class consist of twenty, as soon as one scholar has spelled a word in his turn, he knows that twenty others have to spell before his turn comes again; and away goes his mind, skating, bird's nesting, or playing tops or marbles, until, "in the course of human events," he perceives that another word is coming to him. In the mode first described, each scholar attempts in his mind, the spelling of each word: in the latter, each scholar seldom does more than spell one word in twenty. Compared with the latter process, the former condenses the labor of twenty days into one.—Spelling by rotation ought never to be practiced, except, perhaps, in the smallest classes of the very youngest children.

Every word as it is put out to a scholar should be pronounced precisely as it is uttered by a good reader or speaker, with the same, but with no more slowness or distinctness of utterance. There is a pleasant electrical experiment, where a conducting wire is shaped into the form of letters, which make some word, and on discharging the electricity, it runs up and down the letters and makes each one of them luminous. Now it is not the voice of the teacher in putting out the words, that is to shape out all the letters of the word visibly; but it is the mind of the learner that is to crinkle up and down and make each letter bright and vivid.

The mode of spelling by writing the words put out on slates or paper, has been so often described, that there can scarcely be a teacher in the state unacquainted with it. We make but a single remark as to the mode of examining the words after they have been written. When a list of sufficient length has been written, all the slates or papers may be left with the teacher for his inspection; or he may take one slate or paper from the right or left, and then let each scholar pass his list to his right or left hand fellow. After this is done, let the words be read or rather spelled, in order as they are written, and let each de-

viation from the true orthography be marked for correction.—*Mass. Com. School Journal.*

BEST NATIONAL SECURITY. The London Christian Times, in contrasting the quiet of Great Britain with the state of the Continent says:—

Our people are largely under the influence of the Bible, millions reverence the Sabbath and assemble for worship. Forty thousand Protestant pastors are engaged every Sabbath. Hundreds of thousands of Sabbath school teachers go forth to their work; Scripture readers and benevolent visitors in endless variety of ways, are pressing on the religious movements. The religious aspect of the country is such, the religious elements at work are so effective, acceptable, and growing in the midst of us, that we do not look forward to the future with alarm.

FAST. The word 'FAST,' is as great a contradiction as we have in our language. The Delaware was *fast*, because the ice was immovable; and then the ice disappeared very *fast* for the contrary reason—it was loose. A clock is called *fast* when it goes quicker than time. But a man is told to stand *fast* when he is desired to remain stationary; people *fast* when they have nothing to eat, and eat *fast*, consequently, when opportunity offers.

"In a village in the west of England," says the *Arbroath Guide*, "the following is seen to flourish upon a sign board over the door of an ancient couple:—

'I curs a goose, and wife curs the ganders,'
The meaning intended to be conveyed is
'I cure agues, and my wife cures the jaundice.'

A FLY'S SPEED. By a fair comparison of sizes, what is the swiftness of a race horse clearing his mile a minute to the speed of a fly cutting through one third of the same distance in the same time? And what the speed of our steaming giants, the grand puffers of the age, compared with the swiftness of our tiny buzzers, of whom a monster train, scenting their game afar, may even follow partridges and pheasants on the wings of steam in their last flight as friendly offerings!—*Episodes of Insect Life.*

An answer is requested to the following question.

1. What century is this? 2. When did it commence? C.

FOR THE CRITICS. In the VI. Chronicle of Mar. 14, 1849, under the signature of J. P. F. the word community is repeatedly used without the definite article. Is such a use of the word allowable? C.

MORAL SEASONS. With many persons the early age of life is passed in sowing in their minds the vices that are most suitable to their inclinations; the middle age goes on in nourishing and maturing these vices; and the last age concludes in gathering, in pain and anguish the bitter fruits of these most accursed seeds.—*D'Argonne.*

A Good School at Home.

"Children should, if possible, be educated under the immediate supervision of their parents. For this and many other reasons, few things are more to be desired in every neighborhood, than a good school. Young persons of either sex may be sent abroad with some degree of safety after they have been correctly trained, both in mind and morals, at home. But to send off little boys and girls, away from under the eye of a parent, to a distant school, is an evil only to be endured to counteract or prevent a greater one; and no well informed intelligent parent, will do so unless compelled by the force of circumstances. He wishes to educate his child:—If he can do so near home, it is every way preferable, but if he cannot, he must send abroad. We wish therefore to contribute whatever we may be able towards the establishment and support of schools in every neighborhood of the whole country. The money required to fit out and continue a few young persons at a distant school, will build a house and go far towards supporting a teacher at home. At home, the morals are much safer. Every one knows how prone men are to throw off moral restraints when in a strange place, among strange people; and the moral principle must have been well cultivated indeed, if it as effectually restrain the young, when at a distance, as at home among those who have known them from childhood. To offer no other reason, this, it seems to us, should be all sufficient to induce parents every where to act harmoniously, to unite their means and efforts, and sustain a good school at home."

Truthfulness.

Of all happy households, that is the happiest where falsehood is never thought of. All peace is broken up when once it appears that there is a liar in the house. All comfort is gone when suspicion has once entered; when there must be reserve in talk, and reservation in belief. Anxious parents, who are aware of the pains of suspicion, will place generous confidence in their children, and receive what they say freely, unless there is strong reason to doubt the truth of any one. If such an occasion should unhappily arise, they must keep the suspicion from spreading as long as possible; and avoid disgracing their poor child where there is any chance of his cure by their confidential assistance. He should have their pity and assiduous help, as if he were suffering under some disgusting bodily disorder. If he can be cured, he will become duly grateful for the treatment. If the endeavor fails, means must of course be taken to prevent his example doing harm; and then as I said, the family peace is broken up, because the family confidence is gone. I fear that, from some cause or another, there are but few large families where every member is altogether truthful. Where all are wholly reliable, in act and word, they are a light to all eyes, and a joy to all hearts. They are a public benefit, for they are a point of general reliance; and they are privately blessed, within and without. Without, their life is made easy by universal trust; and within their home and their hearts have the security of rec-

titute and the gladness of innocence. If we do but invoke wisdom, she will come and multiply such homes in our land.—*Household Education.*

A CONSCIENTIOUS CHILD. I knew a boy in petticoats, who had no particular taste for the alphabet, but began to learn it, as a matter of course, without any pretence of relish. One day, his lesson was, for some reason, rather short. His conscience was not satisfied. When his elder brother was dismissed, Willie brought his letters again, but found he was not wanted, and might play. The little fellow sighed; and then a bright thought struck him. (I think I see him now, in his white frock, his large thoughtful eyes lighting up!) He said joyfully, 'Willie says his lesson to himself.' He carried his little stool into a corner, put his book on his knees, and finished by honestly covering up the large letters with both hands, and saying aloud two or three new ones. Then he went to his play, all the merrier for the discharge of his conscience.—*Household Education.*

THE MOTHER AND THE CHILD. Some mothers make it a practice to go themselves to fetch the candle when the children are in bed; and then, if wanted, they stay a few minutes, and hear any confessions, or difficulties, and receive any disclosures, of which the little mind may wish to disburden itself before the hour of sleep. Whether then or at another time, it is well worth pondering what a few minutes of serious consultation may do in enlightening and roosting and calming the conscience,—in rectifying and cherishing the moral life. It may be owing to such moments as these that humiliation is raised into humility, apathy into moral enterprise, pride into awe, and scornful blame into Christian pity. Happy is the mother who can use such moments as she ought.—*Miss Martineau.*

THE VELOCITY OF LIGHT. The Eclipses of the moons of the planet Jupiter had been carefully observed for some time, and a rule was obtained which foretold the instants, in all future time, when the moons were to glide into the shadow of the planet and disappear, and then appear again. It was found that these appearances took place sixteen minutes and a half sooner, when Jupiter was on the same side of the sun with the earth, than when on the other side; that is, sooner by one diameter of the earth's orbit, proving that light takes sixteen minutes and a half to travel across the earth's orbit, or eight minutes and a quarter to come to us from the sun.

A, with 5 loaves of bread, and B with 3 loaves, set out to travel, and soon overtake C, who proposes to sit down and eat with them. They consume the 8 loaves, and C pays them 24 cents for what he has eaten. How shall A and B divide the money?

The great thing to be minded in education is what habits you settle; and therefore, in this, as in all other things, do not begin to make any thing customary, the practice whereof you would not have continue or increase.

THE AGRICULTURIST.

On Renovating Old Orchards.

Thousands of old orchards are found in Vermont which might in a few years be made immensely profitable. An old and worthless tree in Concord, N. H., was made, by grafting and cultivation, to produce, in the seventh year, 13 barrels of fine apples, worth \$2 50 a barrel. A very old and worthless tree in Newton, Mass., having been treated in the same way, now gives an annual yield of 5 barrels of superior apples, and the owner considers it worth \$50. Similar instances might be multiplied.—Whole orchards of old trees, now producing meagre crops of nearly worthless fruit, might, by the same process, be made to produce far more to their owners than could be obtained from the same land in any other way.

With such convictions, and knowing that he had himself renovated an old orchard with remarkable success, we applied to Chauncey Goodrich, Esq. of Burlington for an article on the subject. Mr. G. is about to publish a small work on the Culture of Fruit; and, in compliance with our request, he permits us to copy from the proof sheets part of the chapter on *Manuring and Pruning Old Trees*. We will only add, in relation to it, that his views correspond generally with those of other experienced cultivators, although the directions he gives, as he remarks, are the result of his own practical experience.

From "The Northern Fruit Culturist," by Chauncey Goodrich.

To Professor Emmons, who has been many years engaged in making a geological survey of the State of New York, and at present, (1849) Chairman of the Committee on Fruits for the New York State Agricultural Society, we are indebted for the following analysis of the sap-wood and bark of the apple-tree.

	Sapwood.	Bark.
Potash,	16.19	4.930
Soda,	3.11	3.285
Chloride of Sodium,	0.42	0.540
Sulphate of Lime,	0.05	0.637
Phosphate of Peroxide of Iron,	0.80	0.375
Phosphate of Lime,	17.50	2.425
Phosphate of Magnesia,	0.20	
Carbonic acid,	99.10	34.830
Lime,	18.63	51.578
Magnesia,	8.40	0.150
Silica,	0.85	0.200
Soluble Silica,	0.80	0.400
Organic matter,	4.60	2.100
	100.65	101.450

By this table it will be seen that potash and lime enter largely into the composition of the sap-wood and bark of an apple tree, and as a bearing tree is very exhausting to any soil, it necessarily follows that a large amount of lime or ashes is necessary for an orchard. No intelligent cultivator can examine this analysis without at once seeing the importance of lime or ashes, as a manure for an apple tree. We

have seen trees highly cultivated and manured, grafted with well known varieties of apples, that produced fruit so poor and worthless, in successive years, as to be pronounced by experienced pomologists *counterfeit*, and not the true sort,—in one year so changed by lime and ashes, (each applied to separate trees,) that it could not be recognized as the same variety; in one case, nearly worthless—in the other voted unanimously by fruit growers, the best apple they ever tasted.

All new soils in New England, contained a large amount of alkalis, which was one reason why apple trees grew with such vigor, where old or young trees will now scarce grow at all. Another reason why young or old trees do not now flourish, is a want of vegetable matter in the soil. If any one wishes to test this, let him take two trees; plant one in a new soil just cleared of the primitive forest, and another in a similar soil, which has been thirty years cultivated; and although the last soil may be in as good condition, or even *better* for ordinary purposes, he will find his tree grow three times as fast in the former, as in the latter soil. Another reason, is a want of drainage in many cases. There are thousands of orchards in Vermont, where the soil, once so loose and porous as to readily permit all surplus water to pass off, has now become so compact as to retain much water, making what may be called a wet soil. Orchards standing on such soils, (and they are numerous) should first be thoroughly drained; without it, it is little use to attempt to improve them.

The last reason we shall give, is a want of cultivation generally. An apple tree covering a space of perhaps four square rods, and producing eight to twelve bushels of apples, must exhaust the soil more than any cultivated crop; and as most orchards are treated, if no other causes were wanting, the trees must necessarily die of starvation.

Having stated what we believe to be the cause of the general decay of orchards, we will, as doctors say, prescribe a remedy. If the soil is wet, or if from any cause water is retained any time in the soil, first drain it thoroughly; as standing water near the roots, is ruinous to all fruit trees. Orchards that are used for pastures, should once in two or four years be plowed *under* the trees, keeping the ground loose and admitting air to the roots. As no part of a farm is more neglected than an orchard, the first thing to be done is to manure thoroughly. For old trees apply a bushel of slacked lime or ashes, to each tree, and plenty of long stable manure, with peat or swamp muck, or any coarse vegetable matter, and cultivate the ground as thoroughly as for a crop of potatoes or corn. After being once well manured and cultivated, a top dressing of long stable manure or swamp muck, with refuse lime or ashes, yearly, will keep it in good condition.

It is not best to plant or sow crops *under* the trees, but to give the soil as far as the branches extend entirely to the use of the tree; cereal grains or tall grasses are ruinous to orchards. If used for a meadow, mow the grass under the trees often, and let it rot on the ground, to prevent evaporation from the soil.

After an orchard is thus thoroughly manured and cultivated,—the next season, commence operations, on the trees. Scrape all the old bark from the bodies and large limbs, and with a large brush or broom apply ashes and water to the bodies; this will destroy insects and give a healthy appearance. Whitewashing with lime is always bad for a tree, as a hard crust is left.

As the trees will now be in a growing state, they can be grafted successfully, which cannot be done with scrubby, uncultivated, dormant ones. Commence grafting by removing at least one half of the top, and the whole of the centre, which alone should be grafted this season. This will increase the growth of the lower branches, so that the next season, they can be grafted successfully; the third and fourth season any limbs left should be removed or grafted, so as to present an entire new top.

There are thousands of old trees in every section of Northern New England, which are covered with dead and dying limbs, and healthy, vigorously growing sprouts. These are generally thought to be worthless, when in fact, they are the best kind of old trees for improving and grafting, and are fine subjects for the practical study of Vegetable Physiology. No tree throws out sprouts from the roots, body or branches, while healthy, and the appearance of them is a sure indication of disease; and, like all diseases, the sooner it is attended to, the better. If we examine the roots of a tree which yearly sends up suckers, we shall find them rotten in the centre. If we examine the body or limbs of a tree covered with sprouts, we shall find it rotten at the heart. If these sprouts are yearly removed, the tree will gradually decay and die. If a portion of them sufficient to form a new top are retained, and a severe yearly pruning of the old limbs is given, the whole of the old top may be removed in five years, and a new, healthy, bearing top formed. Sprouts thus growing from limbs are much like those from roots, which are often planted for trees; in one case, the old limbs answer the same purpose, for the roots of the sprouts, thus forming a new top, that the soil does for the other. Dead or decaying limbs rapidly exhaust the life and vigor of a tree; as long as any part of a tree is alive, dead limbs must at some point join the living part, and necessarily be slowly, but constantly, exhausting its vitality. They cannot, like limbs covered with leaves (the lungs of a tree) return sap to sustain the body and roots. Great care should be used, in cutting off large limbs, to cut them off obliquely, and so close to a growing limb, or sprout, as to have a *tip* soon form over its edges, which effectually protects that most vital part of a tree—the bark. To enable any tree to do this, some covering must be applied where the limbs are removed. The best (and we have tried all kinds we have ever heard of) we have ever used, is common tar made thick, when warm, with brick-dust procured by grinding to a powder soft brick; this, when kept in a small kettle, can easily be applied when warm, with a common painter's brush. For small trees or small limbs, common grafting wax will answer all purposes; but from large limbs, it will peel off the first season.

If it is necessary to graft old trees, where new tops are formed from new shoots, and the old top removed, care must be used not to do it too soon: if so the growth is so suddenly checked that the new wood is destroyed. A sufficient number of new shoots, or suckers, to form a new top, should be retained, and suffered in all cases, to grow till one inch or more in diameter at the bottom, and then only a part of the top removed in one season.

Much has been said of cutting out all old or dead wood in bodies of trees, quite to the growing, and applying compositions. This is all well, but requires more time and skillful labor than most men can spare for the purpose, and we shall not give an extended account of it, as if the directions here given for *draining, manuring, cultivating and pruning* are faithfully followed, we will warrant every old tree whose top is filled with thrifty shoots, though half its body is gone, if propped up with posts, to sustain it, to produce in five years, more apples than any nursery tree can be made to do in fifteen; in fact, it will produce as fair fruit, and be as well filled, as in its best days.

If this last remark is true, and we have no doubt of it, the practical inferences, for thousands of farmers in Vermont, are too evident to be mistaken. Do not give over your old orchard and go about to make a new one with young trees; but renovate the old one at any rate, and do what you can towards a young one to come forward afterwards.

Steeping Seeds.

When healthy seeds are moistened with water and exposed in a suitable temperature to atmospheric air, they absorb the oxygen only; and hence they will frequently germinate if soaked in an aqueous solution of chlorine—a gas that has the power of attracting hydrogen from water, and others of its compounds, and thereby releasing the oxygen, which is then absorbed by the seeds, and their germinating process increased. This fact has been proved by Baron Humboldt and others, as in the case of cress seeds, (pepper grass,) which, under ordinary circumstances, require several days to complete the process, but on the application of oxygenated muriatic acid gas, they were found to germinate in the period of three to six hours!

The most eligible mode, perhaps, of applying the chlorine is, to mix a table-spoonful of muriatic acid with about the same quantity of black oxide of manganese and half pint of water. After allowing the mixture to remain two or three hours, the seed is immersed in the liquid for two or three hours more, and then sown.

Another very safe and economical steep for garden and other seeds, consists of a solution of one fourth of an ounce of chloride of lime to one gallon of water, in which the seeds should be allowed to soak for four hours, and then be sown the ordinary way.

Manuring seeds by steeping them in a solution of guano and water, and rolling them in mixtures of blood and lime, &c., has within a few years been practised with some success; at all events, it is

thought to destroy rust and prevent the depredation of insects and birds.—*Am. Agriculturist*.

Subsoil Ploughing.

We have tried several of the experiments recommended in the columns of the *Ohio Cultivator*, and they have all proved real plans of improvement. We tried *Subsoiling* last spring, on part of an old field, for corn. The part that was subsoiled gave a fine growth and kept the stalk and blade of corn green and healthy during the dry weather, while the ear and husk ripened perfectly. The corn was cut off about the middle of September, and put in shocks where it stood till the first of November, when it was husked; the fodder at the time of husking, being perfectly cured, and still of a green color and sweet smell. The kind of corn was not a late variety.—That on the part not subsoiled became dry before cutting time, and the corn was not so heavy.

We intended planting fruit trees in the field, and so thought we would try it on a crop or two of grain before setting out the trees.

Our plough is designed to be worked by one yoke of oxen, or two horses. It consists of two strong iron coulters fastened to a beam of wood, one on each side, so as to run true. It worked tolerably well, and cost five dollars.—*Ohio Cultivator*.

EARLY TOMATOES. When the assistance of a hot-bed cannot be obtained, tomatoes may be successfully started in pots, or other suitable vessels, in a warm room. In this manner the maturation of the fruit will be advanced a week or two, and without involving any serious trouble or expense.

"While the fruit remains green," says a recent writer on the management of tomatoes, "I have much accelerated the ripening by removing the large leaves from dense bunches of fruit, and placing white boards behind them." With the same view, an English author of eminence, recommends tin.

The British fruit raisers consider a good wall for fruit, equal to an advance of six degrees towards the equator. By planting the tomato in beds under a fence brilliantly whitewashed, or painted white, the maturation of the fruit would no doubt be materially advanced. Frequent and copious irrigation with soap suds, and cleanly cultivation, greatly facilitates the development of this fruit.—*Farmer and Mechanic*.

CULTURE OF STRAWBERRIES. A practical man who writes in the *Horticulturist*, says: "Strawberries can be produced in great abundance, and with more ease than any other valuable fruit. With a moderate degree of care and attention, they will yield at the rate of one hundred bushels per acre. They will grow freely on any soil that will give a good crop of corn; and if planted early in spring, will yield a fair crop in June." He says a common error is to plant them in an old worn out garden soil, or to manure them too highly, which gives vines, but no fruit. The best is a good, deep, new soil, not excessively rich.—*Id.*

STRAWBERRIES, instead of being suffered to "run wild," in the beds, should be planted in drills, and

kept so. This arrangement greatly facilitates the cultivation, and secures an appearance of system and neatness not attainable in any other way. Frequent hoeings is as beneficial to this crop, as it is to corn. On both strawberries and tomatoes, lime produces a most excellent effect. When systematically applied, it tends to restrict or diminish the development of haulm and promote that of the fruit. This fact is well understood by most practical gardeners.—*Id.*

CLEANSING THE BARK OF FRUIT TREES. This operation should be performed in early spring as well as in midsummer. The rough, loose parts of the bark should be scraped off, as well as moss, and other parasites. The bark should then be covered with the following mixture, as high as the operator can reach, with an ordinary long-handled whitewash brush: 5 pounds whale oil soap, 1 pound fine salt, 1 pound fine sand, 2 pounds potash, 2 ounces nitrate of soda, dissolved or mixed with water to the consistency of cream, and thoroughly rubbed upon the bark.—*Working Farmer*.

GRIDLEY'S BELLOWS CHURN-DASH. This invention of a yankee brain, we understand, is daily gaining favor with butter-makers who have used it. It is a very simple instrument. It consists of an inverted conical tin cup, attached to a staff, with four air tubes extending from the lower outer edge of the cup to the top of the inner surface. When the dash is plunged into the cream, the air which fills the cup escapes through the tubes, and thus permeates the whole body of the cream. The contact of the oxygen of the air with the oily substance of the cream is what produces the butter. Hence the value of the Bellows Churn-dash. It also obviates the adhesion to the butter of the old dash, which made churning so laborious.—*North Gaz.*

RAT CATCHING. In reply to an inquiry, we would communicate to the public, and more especially to our discriminating subscriber, the following recipe, which was purchased by a friend, as a "secret," from an old rat catcher:—

"Take powdered assafetida, 2 grains; essential oil of rhodium, 3 drachms; essential oil of lavender, 1 scruple; oil of anise, 1 drachm."

Let the assafetida first be well triturated with the oil of anise; then add the oil of rhodium, continuing to rub the material well together with the pestle in the mortar, after which add the oil of lavender, and cork up the mixture in a bottle until required for use.

The method of applying the compound, consists merely in smearing a tame rat with it, after mixing a few drops of it with a little flour or starch, or employing the paste thus formed as a bait for the trap. It is stated, that a tame white rat besmeared with it, let loose in a vault, has been known to be followed by half a dozen other rats, which appeared to be enamored by their albino decoy. A trap placed in a cellar haunted by rats, and left there all night, was filled the next morning with these pests to the number of thirty, and was surrounded by a host of others, that actually could not enter from want of room!—*Am. Agriculturist*.

Fruit and Fruit Trees.

MASSACHUSETTS LEGISLATIVE AGRICULTURAL SOCIETY.

Mr. Wilder, of the Council, the President, on introducing to the meeting the subject for discussion, remarked in substance as follows :

The grain and vegetables of the earth may be considered as the necessary and more substantial blessings of Providence ; but I have ever viewed the delicious fruits of the orchard and garden as the overflowings of his bounty ; and whether as a luxury, contributing to health and the gratification of the appetite, or as a profitable crop for the farmer, the subject has quite too often been esteemed only as of secondary importance.

Formerly, the cultivation of the finer fruits was limited to the gardens of the opulent, or the immediate proximity of a market ; but the multiplied facilities of intercourse and transportation, the emulation excited by horticultural exhibitions and conventions, and the increasing importance of this product in a commercial point, has awakened an interest which has spread, as with magnetic speed, throughout our land. Thousands of trees are planted, instead of dozens, orchards and gardens on the most extensive scale have been commenced, and so generally has this taste been diffused in our vicinity, that the cottage of the most humble laborer, without its fruit tree or grape vine, would almost be considered an anomaly. Amateurs and nursery men have also congregated in their collections hundreds of varieties for trial ; and so great is this enthusiasm, that the cry is not simply " who will show us any good," but, Who will show us any thing *new* ? Fears have been expressed that this " fruit-growing mania " would overstock the market ; but thus far it has tended to foster a taste for better quality, better specimens, and to augment rather than to diminish the price.

In no part of the world is this enterprize crowned with better success than in our own. The fame of American fruit is already proverbial in foreign markets, and the day is not distant, when in addition to the enormous consumption at home, we shall supply England with the finest pears, as we do now with the finest apples that appear in her markets.

A gentleman, (P. Barry, Esq., of Rochester, N. Y.) who has just returned from Europe, remarks, that in the English market, there will be an " unfailing demand for the products of our orchards ; " that apples such as would scarcely sell at home were there cried up as " nice American apples," and brought from three to six cents each. Mr. B. says he examined in the fruit rooms of the London Horticultural Society, " 200 or 300 varieties of fruit, and that there was not a single large, clear, well-colored specimen among them." The same gentleman took out with him specimens of the Northern Spy apple, (which we now have before us) and some other varieties.— They elicited the admiration of all, and indeed, says he " there are no such apples in England."

With the zeal so widely manifested on this subject, it becomes a matter of the first importance to ascertain the best and most successful mode of cultivation,

the great preliminaries of which, I think, may be comprised in the following considerations :

1. The selection of such sorts, and only such, as by uniformity of character, in various localities, particularly our own, have, after a trial of years, been proved to be hardy, productive, and of excellent quality.

2. The right soil, and the proper preparation of it.

3. The appropriate kind of manure.

Much disappointment has been experienced by the selection of new varieties and of high sounding names, rather than for any known excellence. To avoid this error, and in compliance with frequent requests, I submit a list of such varieties in the various classes of fruits as have been well tested and found generally to possess the above characteristics.

APPLES.

For three sorts—Large Early Bough, Gravenstein, Baldwin.

For six sorts—add Red Astrachan, Porter, Rhode Island Greening.

For twelve sorts—add Early Harvest, Williams, Fall Harvey, Minister, Hubbardston, Nonsuch, Roxbury Russet.

For Winter Sweet Apples—Danvers Winter Sweet, Seaver Sweet, Talman Sweet.

Our country abounds with native varieties of the Apple ; and there are, no doubt, many others equal or superior to the foregoing, but not yet generally tested. Among those of high reputation, are the Northern Spy, Melon, Mother, Foundling, Magnolia, Jewett's Red, Twenty Ounce, and the beautiful Ladies' Sweeting, now before us, and which, should it prosper in our soil, will take high rank as a very late keeper and superb fruit.

PEARS.

For three varieties—Williams Bon Chretien, or Bartlett, Vicar of Winkfield, Beurre d'Aremberg.

For six varieties—add Bloodgood, Louise bonne de Jersey, Flemish Beauty.

For twelve do.—add Seckel, Fondante, de l'Automne, Urbaniste, Golden Beurre of Bilbao, Beurre Bose, Winter Nellie.

For eighteen do.—add Dearborn's Seedling, Andrews, Tyson, Heathcot, Long Green, Buffum.

For new foreign sorts of good promise—Beurre d'Anjou, Paradis d'Automne, Doyenne Bossouck, Duchesse d'Orleans, Jalousie d'Fontenay, Vendee, St. Andre.

For new native sorts—of high reputation where they originated—Pratt, Westcott, Abbott, Ott's Seedling, Brandywine, Leech's Kingseasing, Howell.

CHERRIES.

For three varieties—May Duke, Black Tartarian, Downer's late.

For six sorts—add Black Eagle, Elton, Downton.

For twelve sorts—add Knights' Early Black, Graffion or Bigarreau, Sweet Montmorency, Sparhawk's Honey, Coleur de Chair, Late Duke.

PLUMS.

For three varieties—Green Gage, Jefferson, Washington.

For six varieties—add Lawrence's Favorite, Purple Gage, Imperial Gage.

For twelve varieties—add Bingham, Bleeker's Gage, Yellow Gage, Red Gage, Smith's Orleans, Royale Hative.

The President remarked, that having occupied his full share of the time, the other points alluded to would be left for another opportunity.

Mr. Gray, of Boston, thought our country destined to become a great fruit growing country, for our climate was peculiarly adapted to it. For raising grass or grain our climate was not so favorable as that of England. It is too drying; the sun is too powerful. But this feature is favorable for raising the best qualities of fruit. In England, and also in France, they are obliged to resort to artificial means in the cultivation of fruit, owing to their want of sufficient heat. The natural mode of cultivation succeeds best with us.

To counteract the dryness of our climate, Mr. G. regarded sub-soiling as very important. By this means those roots that have a tendency to shoot downwards, can do so. It was also regarded as very important to keep the soil around the trees light,—not to dig round them with a spade so as to injure the roots, but to stir up the soil with a rake or fork. The soil being kept light, operated as a non-conductor of the heat. The roots of fruit trees that are planted shallow, are found to run very near the ground, and there is danger therefore of their being parched. To prevent this, the soil should be covered with leaves or moss, by which means the moisture is retained in the earth, and the necessity of watering it, which would be very troublesome, is dispensed with. The ground around the trees should not be kept in a state of cultivation.

Transplanting is a very important process, and should be performed with great care. The spring is the best season for planting trees with us. Our winters are so long and severe, that trees planted in the fall do not flourish well.

Mr. Rice, of Newton, mentioned some of the obstacles to the cultivation of fruit trees. To prevent apples from becoming wormy, Mr. Rice had taken pains to gather up all those that fell from the trees. He approved of digging around the trees, not in their immediate vicinity, (for that did but little good) but so far as the roots extended.

Mr. Calhoun thought the farmer's attention might be directed to fruit growing with more certainty, than to almost any other branch of his business. Fruit trees are generally left to take their own course; but by proper cultivation they may be made productive in one-half the time required when they are left to themselves. He generally went through his orchard two or three times every week, towards sunset, to see what each tree required. He mentioned a method of preserving trees described to him by a friend, which was,—to place the apples in a barrel between layers of dry saw dust mixed with lime. The apples are thus kept sound, and retain their flavor.

Every orchard will contain a certain variety of apples, to which the soil is peculiarly adapted, and

which flourishes better than any other in that locality. The farmer should take pains with the cultivation of this species of fruit, rather than make experiments with new varieties. A very famous variety of apples will often be found not to flourish well in particular soil. It is not uncommon that different orchards in the same town do not produce equally well the same variety of fruit.

Mr. Brigham, of Westboro', mentioned a plan, which he had tried with success, for preventing worms from destroying plum trees; which was to place a brood of chickens underneath them.—*Traveler.*

SECOND EVENING.

Hon. M. P. Wilder remarked, that the due preparation of the soil was the first important step to be taken, and the man that will not trench or subsoil his ground to the depth of two feet, had better not attempt the cultivation of fruit, on many kinds of soils. In trenching, the sub and top soil should be well mixed; and trees planted on land thus prepared, suffer little by drouth; their roots penetrate every part of the soil, and a healthy and vigorous growth succeeds.

In regard to the great secret for the successful cultivation of trees, we want to apply to them the requisite manure. By the analysis of Liebig and Dr. Emmons, we have learned what are the inorganic, or mineral constituents of the bark and wood of several varieties of fruit trees. By Dr. Emmons's analysis, there are three elements that greatly predominate; in 100 parts of the sap-wood of the apple tree, there are 16 parts potash, 17 parts phosphate of lime, and 18 parts lime; in the bark of this tree, 4 parts potash, and 51 parts lime. The ashes of the sap-wood of the pear tree, show 22 parts of potash, 27 parts of phosphate of lime, and 12 parts lime; the bark giving 6 parts of potash, 6 phosphate of lime, and 30 of lime. From the above it will be seen, that there is quite a difference in the relative proportions of these three inorganic bodies in the bark and wood of the apple and pear tree; and there are like differences in other varieties of fruit trees, which seem satisfactorily to account for the reasons why one kind of tree will flourish in a soil in which another variety would not succeed; and it seems clearly to point out the necessity of adapting the manure to the kind of tree, or, in other words, the utility of the application of "special manures" to each variety of fruit trees.

Mr. Bartlett, of the Cultivator, said, he would offer a few remarks on the appropriate manures for fruit trees. We all know that the best soil for an orchard is a naturally fertile upland soil, recently cleared of its forest growth by burning; the ashes left upon the ground, with the unburnt and decomposing vegetable matter, with the gradual and slowly decaying roots of the forest-trees in the ground, furnish fruit trees of all kinds with their most appropriate food. In such soils, there seems to be every necessary for a thrifty, hardy, well-ripened growth of wood, a large, thick, but not succulent leaf, and fair, good-sized fruit. But in process of time, the orchard begins to fail, from a deficiency of food in the soil, it

having been deprived of its fertilizing powers in several ways. 1st, by the potash, lime, phosphoric acid and other salts, that have entered into the growth and composition of the wood of the tree. 2d, by the amount in the leaf. The food of the tree is, for the most part, taken in solution through its roots; the various mineral matters are passed into the tree in a dissolved state, the sap passes to the leaf, the superfluous water is given off by evaporation, but not the substances which it held in solution. These in part are distributed through the tree and fruit, and in part remain as a deposit in the cells of the leaf. Gradually, the leaf chokes up, its functions are impeded, and finally entirely stopped. When the leaf drops, it contains a large per cent. of mineral matter; leaves contain a much larger per cent. than the wood of the trunk. The dried leaves of the elm contain more than 11 per cent. of ashes, while the wood contains less than 2 per cent. The beech leaf 7 per cent., the wood, little more than $\frac{1}{2}$ of one per cent. The same or similar relative differences, exist between the leaf and wood of other trees.

In the fruit, there is deposited, also, all the inorganic substances necessary for the sustenance of animals. Cattle and swine can be kept in a thriving condition on fruit alone. The annual drafts made upon the soil in the several ways named, tend rapidly to impoverish it. The grand problem, then, for the fruit grower to solve, is, what is the most appropriate manure to keep up a healthy growth of his trees? It seems to me, that Dr. Emmons, Mr. Downing, Rev. H. W. Beecher, and Profs. Kirtland and Liebig, have pretty accurately solved this problem. Dr. Emmons's analysis, gives the qualities and relative proportions of the inorganic bodies of various fruit trees; and founded upon this analysis, Mr. Downing has given us, in the *Horticulturist*, several recipes for composting "special manures" for the several kinds of trees. Mr. Beecher's remarks, on the "practical use of leaves," in the *Horticulturist*, page 349, 2d vol., sheds much light on fruit-culture. Prof. Kirtland's letter, on "special manures for fruit trees," should be read, and its principles practised upon by every farmer and fruit grower in the country. Prof. Liebig says "if plants be fed with ashes of the same species of plants, they are supplied with their natural inorganic food." Prof. Horsford says, "Liebig has shown the truth of the principle in a great variety of ways, to which he was an eye witness." We have a truthful illustration of this fact on a large scale in our ocean prairies, and in our boundless forests. The prairie and the forest soil are annually enriched, by the decomposing vegetable matter. The reason of this is obvious; for from the foregoing we readily infer, that the ashes of the limbs and trimmings of fruit trees, with the leaves, and even the pumice of apples, when properly prepared, would be the most suitable manures for an orchard. It is seldom, if ever, the ashes made from the wood of the apple tree finds its way back to the orchard; the leaves are frequently blown away, and the pumice is thrown by as a nuisance. A compost of leaves and soil from the woods, with the addition of ashes, lime, bone-dust, gypsum, and salt, we think would be the next best application.

Stable manure will cause trees to grow rapidly, but from the large amount of organic and nitrogenous matter in the manure, the trees make too much wood, which does not ripen well, and is liable to suffer by our severe cold winters. Many years ago, I forced the growth of a great variety of fruit trees, with animal manure; they were remarkably thrifty, but the wood did not ripen, and the winter of 1831-2 destroyed a large portion of them. Since that time I have used materials for manuring my fruit trees, more in accordance with the operations of nature, and with the best results.

Mr. Walker, President of the Mass. Horticultural Society, said he had been much interested in the remarks on manures, by the gentlemen who had spoken upon this subject. The due preparation of the soil, he thought, was of primary importance; he should rather dispense with manure, than with the proper trenching of his ground for newly transplanted trees. After the trees had partially exhausted the soil, the manures recommended by Mr. Bartlett were the best kind. There has been a great mistake committed in attempting to grow too great a variety of apples, &c. The farmer should cultivate only such for sale, as are adapted to his market. He thought the Rhode Island Greening possessed more good qualities than any other apple. The Gravenstein next. This apple would rank in our market among apples, as the Bartlett pear does in that variety of fruits. The Baldwin he thought next in good qualities. There was no danger of over-doing the market in good fruit, &c.

Domestic Economy.

FRITTERS. Scald a quart of sifted Indian meal; when it is cold add a gill of milk, three beaten eggs, and two table-spoonfuls of wheat flour. Make the batter very thick, and drop it by the large spoonful into a frying pan containing enough boiling fat to prevent the cakes from sticking. Fry them brown, and send them to table hot. To be eaten with butter and sugar. If you cannot procure eggs, substitute a gill of yeast, and let them stand till night.—*Housewife*.

A GOOD AND CHEAP DESSERT DISH. Wash a pint of small hominy very clean, and boil it tender, add an equal quantity of sifted meal, make it into a batter with milk, and two table-spoonfuls of butter, and four eggs. Beat it well, grease your griddle or frying-pan with a little butter or lard. Then pour in your batter, allowing enough to make each cake the size of a dessert plate. Eat them with cream and sugar, or with butter and molasses.—*Housewife*.

LIGHT BATTER BREAD. To a pint of milk, stir in one pint of Indian meal, half pint of wheat flour, one tea spoonful of tartaric acid and one of soda. Bake it in a shallow pan half an hour.

BATTER CAKES. Mix together a pint of sifted Indian meal, and a pint of wheat flour; add half a gill of yeast. Make it up stiff with water at night. In the morning add an egg, and new milk sufficient to make it thin enough to bake on a griddle.

THE

⁴
Educ P 229.18

SCHOOL JOURNAL

AND

VERMONT AGRICULTURIST.

VOLUME THIRD.

WINDSOR:

PUBLISHED BY BISHOP & TRACY.

1849-50.

1891

VERMONT AGRICULTURIST

VERMONT AGRICULTURIST

VERMONT AGRICULTURIST

VERMONT AGRICULTURIST
PUBLISHED BY THE
VERMONT AGRICULTURAL SOCIETY
1891

THE

SCHOOL JOURNAL

AND

VERMONT AGRICULTURIST.

VOLUME THIRD.

WINDSOR:

PUBLISHED BY BISHOP & TRACY.

1849-50.

Ed. P229.18 .

HARVARD COLLEGE LIBRARY
BY EXCHANGE
Mar. 2, 1942

SCHOOL JOURNAL

AND VERMONT AGRICULTURIST.

Vol. III.

WINDSOR, VT., MAY, 1849.

No. 1.

THE SCHOOL JOURNAL.

Volume Third.

The publication of this paper was commenced as an experiment, and after the trial of a year it was not without hesitation that a second volume was commenced. The circulation during the second year, however, considerably exceeded that of the first; and the prospect for the Third Volume, so far as we can judge, is still better. Although, therefore, the low price at which the paper is sold forbids the expectation of any great profit, we are yet encouraged to go on, and in the confident hope that the friends of educational and agricultural improvement will not suffer us to lose anything.

The paper unites, it will be noticed, two great and essential interests, and appeals to the people upon subjects that concern every one. The two interests are intimately connected. Agriculture must be improved by means of greater mental activity and a more extensive range of knowledge; and for these, among our farmers, we must look chiefly to the improvement of our schools.

The State is opening to new influences; new sources of prosperity, new avenues to wealth, new means of turning our powers of body and mind—our acres, our flocks, our herds, to account, are brought within our reach. In these circumstances, every patriotic citizen should be alive to every means of giving a wise and salutary direction to activity, and of developing all our resources.

In this work the School Journal and Vermont Agriculturist proffers its assistance. It is the only agricultural paper in the State; and there is no other devoted to education. We invite the friends of improvement to aid us in making the most of it as an agency for good. It is intended for the many; it is so cheap that it may be in every family.

For terms, see last page. Any one may constitute himself an agent; he has only to collect and forward the money and order the number of papers he wants, with suitable directions.

Please Write for the Journal.

Superintendents, Teachers, and others interested in the cause, are requested to think a little of this paper as a means of doing good. If we circulate

only four thousand copies, what it may contain will reach far more Vermont readers than it would through any other channel. In no other way can you reach at once so many Vermont minds, and to a great extent they are the very minds that you would most wish to reach. Your aid is needed. The cause of education is receiving a new impulse, and needs the aid, in every way, of all its friends. Is there a better way to contribute now and then your mite, than to send us a few thoughts, or a little information? During the last year, we have been under special obligations to the Windham County Superintendent for his frequent communications. We trust that many others will consider the example, and do likewise. The value of the paper depends upon it—far more than upon anything that the editors alone can do.

School Architecture.

One thing that we have to rejoice in at the commencement of a new volume is the fact that, by a wise act of our Legislature, a copy of BARNARD'S SCHOOL ARCHITECTURE has been placed in the office of every Town Clerk in Vermont, for the use of the towns. A more judicious expenditure of the small sum required to effect this object, could not have been devised. In this excellent volume will be found not only all that is necessary for guidance in the erection of school houses, but a great amount of such other information as is most needed for the improvement of our schools. Hereafter no school house should be built in Vermont without a careful examination of the principles here set forth.

It is important, too, that Town Superintendents, School Committees, and Teachers, should avail themselves of the opportunity to become acquainted with the subjects discussed by Mr. Barnard. We trust that the books will be well taken care of;—which means, not that they will be locked up, but that they will be well and thoroughly and extensively used, so as to get the good out of them.

"SUB-ROSA." The ancients consecrated the rose to Harpocrates, the God of silence; and therefore frequently placed them upon the ceilings of rooms destined for the receiving of guests, implying that whatever was transacted there should not be made public. Hence the phrase, *sub-rosa*; or, under the rose.

Remarks on Books and Teachers.

To the Editors of the School Journal :

The communication of your correspondent Rho, in the March number of the School Journal suggested several important considerations to my mind, on which it would give me much pleasure to converse with him. This, however, is probably out of the question. But, as the subject is one of universal interest, especially to teachers and superintendents, I shall make free to ask him a few questions through your columns.

The present school-law confers no direct power on the superintendents to remove a teacher for incompetency. It merely makes it his duty to examine into the *capacity* of the teacher, and his *method of conducting* the school, directing him at the same time to consult and advise with the prudential committee on these points. But though the letter of the law is rather vague, its spirit evidently requires him to see that the school *receives no detriment* either from the stupidity or unfaithfulness of its head.

The first school which your correspondent notices presents a striking case in point, certainly one of the most flagrant that ever came under my notice. The teacher betrayed not only *ignorance*, but *stupid sluggishness*, or *inattention*. That a person, before one officially appointed to examine his school, should suffer his pupils, without a rebuke, to wander so far from the point, as "invariably to answer yes, or no," to such questions as "is it right or wrong to do so and so," and should, "as invariably," read such a question "with the rising inflection," shows such a degree of heedlessness and incapacity, if not of moral obliquity, as must surely be without a parallel even among the lowest class of teachers.

But my object in addressing you is not to expose the wretched state of the school. I wish to learn from your correspondent, for my own guidance, as well as that of all other superintendents, the steps that he took to *remedy* so serious an evil, and what was their result. In a case of this nature, a superintendent is placed in a delicate situation. His duty to the school which the state has placed under his care, calls imperiously for action, while at the same time he has to guard against offending the natural jealousy of the prudential committee, by what they may consider an interference with their rights and duties. It seems to me, then, highly desirable, that superintendents should assist each other with the light of their experience, and I trust that our friend "Rho" will give us all the requisite details.

There is another point on which I hope your correspondent will enlighten us. He considers it "a very awkward method of asking questions" to say, "Is it right or wrong to do so and so?" Now as the Moral Instructor is extensively used in this region, and as it is desirable that such questions should be put in a *variety* of forms, a practice, indeed, urged on the teacher by the book itself, it will doubtless be acceptable both to teachers and superintendents, if your correspondent will favor us with one or more other forms of expression for this important question. Let me say, however, that if the "Directions to Teachers" in relation to these questions were attended to,

we should never hear of such blunders as were committed in the school alluded to. Hear what the book says :

"The teacher should be fully aware, that his situation is different from that of a mere mechanic. He is not placed in a school to smooth a block or to turn a crank. He is put there to form immortal mind, and he must bring his own mind to the task. The questions must *not* be read over in a *slovenly, parrot-like* manner. [How close a description of the case in point!] He should observe, *by the answers, whether they are fully understood, and vary their form when necessary.*

"The pupils should be required to give as full an answer as possible to every question. For instance : to the question, "Does being peevish or cross make us happy or unhappy?" the answer should not merely be "unhappy;" but "being peevish or cross makes us feel unhappy." A simple affirmative or negative should *never* be received as an answer. For instance : to the question "Can we ever be too grateful to God for making our duty so pleasant?" the answer should not be "No;" but "No, we can never be too grateful for it;" or "No, we can never be too grateful for having our duty made so pleasant." At first this will require some little effort on the part of both pupil and teacher. But it will soon become easy; and it will confer a vast increase of power over the attention, and of fluency of expression, on the pupil. The teacher should also endeavor to catch the *spirit* of the questions, so as to be able to apply a similar series to every occurrence that may come to the knowledge of his pupils, whether in or out of school. The conscience cannot be too frequently exercised in deciding between right and wrong."

In conclusion let me remark, that, although it is true, as your correspondent observes, that the very best book may be worthless in the hands of an incompetent and sluggish teacher, such as he describes, while "a full and feeling heart," like that of the other teacher, might draw useful questions from the storehouse of "her own mind," even though she had no book save the most feeble production that ever forced its way into the schools, still this is no reason at all why the best books should not always be preferred. Every teacher, nay more, every person who in the present state of affairs may even be termed a *good* teacher, is not possessed of a "full and feeling heart," a readiness at forming questions suitable for developing both the moral and intellectual faculties of childhood. As soon as *all* our teachers have become thus qualified, we may safely dispense with such helps as those afforded by the Moral Instructor, but not sooner.

You will perceive that I have taken for granted that your correspondent is a superintendent; surely not a very violent assumption. For, how rarely do we hear of a visit from a private individual to *one* Vermont school! but to *two* in immediate succession, this, indeed, would be a miracle worth recording.

Mot.

Sir Peter Lely made a rule never to look at a bad picture, having found by experience, that whenever

he did so, his pencil took a tint from it. Apply the same rule to bad books and bad company.

For the School Journal.

Send your Children to the Summer School.

As the Summer Schools are soon to commence, I would urge upon parents the importance of making arrangements to have their children attend these schools, especially the older children. If boys over 10 or 12 years old are detained at home, more or less, to work on the farm, there can be no such excuse for the girls of this age, who are so seldom found in summer schools. Setting aside the large boys, it is believed among the *other scholars*, there is a far greater loss from absence and irregularity in summer than in winter; and this is, in a great measure, owing to the *indifference of parents*, and the foolish notion of young girls, that when 14 or 15 years of age, they are *too old* to attend school! No matter how *ignorant* they are, or how well qualified the teacher is to instruct them, they are *too old* to attend a district school in summer! So they stay at home, wasting the most valuable portion of their lives, in idleness, vanity, street-romping, gossiping, visiting, dissipating their minds instead of improving them.

Some *few* girls under 10 may be necessarily detained at home to assist in housework; a *few* may be so forward as to derive no advantage from the school; but *most* girls of this age do not stay away because there is *nothing* for them to learn, but because they *do not like* to attend a summer school, and their parents do not think it a matter of much importance whether they attend or not. Girls who could make more improvement in three weeks than perhaps in a year, when younger, are permitted to remain at home in *idleness*, or doing a few *little nothings*, which might as well be done before or after school; or perhaps braiding a little palm leaf to buy some trinkets to adorn the body, while they starve the mind! And this too, when a school is supported, at great expense, for their instruction!

Parents, there are many reasons why these children,—the older girls—should attend the summer school.

1. The girls will suffer less from the ill-constructed, ill-ventilated, and cold school houses, in summer than in winter. Then, too, there is less danger of interruption from storms, cold weather, and the influenza. Send your children to the school in *summer*, for, in summer, the music of the birds, the voice of the flowers, and the genial influence of Nature is favorable to the cultivation of the mind.

2. Consider the loss your children suffer by staying away from the school. When children are 14 or 15, their minds *just begin* to make rapid advances; so that they can obtain more knowledge and make more progress up the hill of science in a month, than in a year, or two years, at an earlier age. What can equal the folly of those parents, who, at this critical time, when their children are just beginning to reap the fruits of years of drudgery in the school-room, when the fruits of knowledge are just beginning to ripen, allow their children to stay at home! A

few days of sun, when grain begins to ripen, will make more than half difference in the crop. So a few months of schooling, when your children begin to learn, will make more than half difference in their education. Are there not hundreds of young ladies in our towns not *half so well educated* as they would have been had they attended two or three more summer schools? But alas! at just the age when the germs of future knowledge and progress were developing, and a taste for mental cultivation forming, they left the school! They did not learn *quite enough* to secure future growth and progress, so that their minds remain stationary, like blasted, shriveled corn.

3. The expense of the schools is a reason why you should send your children. Two hundred and twenty-five thousand dollars is annually expended on the common schools in this state; and probably one third of this sum is wasted, in consequence of the *absence* and irregular attendance of scholars,—of scholars, too, who *might* be at school as well as not. Within the limits of my observation, the money, in many summer schools, has been *more than half* wasted in consequence of the absence of those who had *no excuse* for staying away. And parents, strange to say, feel justified in allowing their girls, after 12 or 14 years old, to do as they please about attending school in summer: as though the people were under obligation to support schools, but parents under *no obligation* to send their children to the school! as though the children should be allowed to do *just as they please*, at that age when they most need parental influence!—for, if there is ever an age when girls should not be allowed, always, to do as they please, it is between the ages of 12 and 16.

4. Those who pay taxes have a right to complain if you do not send your children to school. It is hard enough to pay school taxes when the money is well expended, but to pay such heavy taxes as the people of our state do to educate children *who stay at home*, is intolerable. Would you not complain if you were paying taxes to repair the roads, and yet the roads were not repaired! But is it not a greater grievance to pay money to educate children, and to have those children *uneducated*? I hope by calling the attention of parents to this subject there will be a more general attendance of the older scholars in our schools this summer. J. T.

Wardboro, April, 1849.

The difficulty of acquiring our language, which a foreigner must experience, is illustrated by the following question: Did you ever see a person *pare* an apple or a pear with a pair of scissors!

At times a child's natural disposition should be suffered to flow out as much as is possibly consistent with restraint upon evil actions. It is only in this way that one can ascertain what the disposition is, and so know how to correct its eccentricities, or its aberrations. Some persons think they have reformed a bad disposition, when they have only repressed its external manifestations by fear, or some base motive. So quacks declare they have cured a cutaneous dis-

ease, when, by some noxious application, they have driven it from the surface to the vitals.

School Houses.

According to the State Superintendent's Report, there were erected in Vermont during the last school year, 34 school houses, at an aggregate expense of \$11,050, or an average cost of \$325 each, besides several others of which the cost was not specified. Of those reported, Caledonia County alone erected 12, at a cost of \$5,800, or more than \$480 each. Such a result for a single year, the Superintendent remarks, is believed to be entirely new in the history of the State.

This is an evidence of progress which surpasses our expectations. It proves that the people are engaged in the business *by districts*, and are becoming ready to do what is necessary in order to secure good schools. Thanks, especially to Caledonia, for her excellent example.

Teachers' Institutes.

The practical question, in short, is:—How is a corps of thorough and whole-hearted teachers to be trained and brought into the field? How can we prepare them and send them forth on their mission of beneficence,—scattering blessings around them "like a shower of gold"?

Doubtless, every member of society has individual and personal duties to perform by way of aiding in the attainment of an end so much desired. The teacher must first be elevated to his proper social position,—to that respectability which the responsibility of his duties entitles him to enjoy. He must receive from society all the encouragement, in whatever form, which may be necessary to urge him to the attainment of noble ends. But it is the people's legislators,—the State in its political capacity,—that the Superintendent is more especially required to address. And while individuals in their private positions have duties in relation to our common schools which they cannot transfer, so also has the State its own appropriate sphere of duty and action in relation to them. That sphere embraces the purposes of giving them countenance and encouragement; of so legislating as to secure on the part of individuals and minor corporations the necessary concert of action; and of making such pecuniary provisions and appropriations for them as may be essential to their success. Such provision the State has, to some extent, already made. But whether further aid is not now demanded, or whether some part of the present annual expenditure for their benefit could not be more advantageously directed into some different channel, is an inquiry worthy of attentive consideration. Be the mode, however, what it may by which the end shall be gained, it is believed, in view of the suggestions which have been made, that the State could, at present, do its schools no better or more acceptable service than that of making an appropriation for the benefit of Teachers' Institutes.

Teachers' Institutes have been established, in many other States, and legislative appropriations have been made to encourage and sustain them. The pecuniary

assistance needed is for the purpose of procuring competent instructors. So far as these institutions have been in operation in this State, this expense has been borne mainly by a few intelligent and beneficent friends of education. It is scarcely to be expected that teachers, while their wages are so low, will be prepared to incur any great expense in attending these schools, beyond that necessarily incurred for board; and especially so while they remain ignorant of their value.

An appropriation for a limited period,—we would suggest the term of three years,—of the sum of seventy-five cents for each pupil who should attend for the full term of two weeks, it is believed, would remove the difficulties now in the way of the general introduction of these schools into the several counties of the State. And when once they have been introduced, and teachers have learned their true value,—have discovered what important aid they can furnish them in the proper discharge of their duties, and how much they are calculated to cheer them on their toilsome way, it is confidently believed they will then be self-sustaining institutions.

The actual amount required to meet such an appropriation cannot, of course, be definitely estimated.—We might, however, presume that the number of pupils attending would average from 50 to 100 for each Institute. And if one were established for each county, the sum required to meet the appropriation, taking the medium of the supposed attendance, would be a little short of \$800; a sum considerably less than half the amount appropriated for the benefit of Agricultural Societies. We apprehend, however, that this sum is larger than would be called for during the first year; but we should trust less than would be required for the last. For, if such were the result, it might be regarded as an omen of good,—a token of the successful operation of the measure, and a guarantee that it was accomplishing its intended purpose. Let us be assured that at least 1000 teachers in the State enjoy annually the advantages of the Institute, and our hearts might leap for joy.—*State Superintendent's Third Report.*

COMMON SCHOOL CONVENTION. A Common School Convention will be held at Saxton's River, Wednesday, May 16th inst. Exercises to commence at 9 o'clock A. M. Addresses may be expected by Rev. Dr. Clapp, of Bellows Falls, Rev. Darius Forbes, Superintendent of Windsor County, and L. Ward, Principal of Saxton's River Academy. A general attendance of the friends of education in the vicinity is requested. Town Superintendents, and School Teachers, in the Northern part of the County, are earnestly invited to attend this Convention, and be there in season, 9 o'clock A. M.

JAMES TUTTS,
Sup. of Common Schools for Windham Co.
Wardsboro, May 1st, 1849.

BACK NUMBERS. A few copies of the first and second volumes are on hand, and will be sold to Teachers and School Districts, who may wish for a

complete set, at 25 cents a volume, neatly done up in paper covers.

Children at Home.

It is our intention to devote part of each number to our younger readers at their homes. We cannot leave them the moment they quit the school-room. We shall endeavor to furnish something for them to do in the family; some question, perhaps, for them to answer, some inquiry for them to pursue, some amusement that may make the fire-side more pleasant while it exercises their wits.

In conducting this department we ask the assistance of our young friends for whom it is intended. Let them send us their own compositions, or questions relating to any of their studies. Parents and Teachers, also, may do no little good by thus stimulating inquiry and effort among our younger readers. Well-prepared questions in arithmetic, geography, or history, or relating to any of the common phenomena of nature, would be acceptable. And the scholars must take care to send plenty of answers.

For the School Journal.

Solutions of Questions in the April No.—by P.

1. "C." asks, "What century is this, and when did it commence?" To this I reply, it is the *nineteenth* century, and it commenced on the first day of January, 1800. But why not in January, 1801? Because *Time* is never reckoned till it has expired. As Young says of Death, "arrived, 'tis past." Thus the day commences at 12, midnight; but it is not *one* till the first hour is *past* and *gone*. That first hour is counted only by minutes and seconds. In the same manner the life of a child commences at birth, not at the age of *one*. His *first* year is counted by *weeks* *months*. It is during his *second* year that he is called *one* year old. Thus, also, at that important moment of his life when he can properly be called *twenty-one*, the twenty-one years are already spent and gone; he has left the age of pupillage, and entered on a new life. For the same reason, at that very instant that a man can be said to be a hundred, his first century has expired. He is actually living in his second century.

By applying these remarks to the Christian or any other era, it is evident that the first century begins at 0, the second at 100, and the nineteenth at 1800.

2. "C." again asks, if the use of the word "community" is allowable without the *definite* article. I answer, that it is legitimately used with both articles, and also with other limiting words. Thus we say, "a community flourishes," "any community would sink under it," "it is for the benefit of the community," "this community allows it; that community forbids its use."

But if C. refers, as I suppose he does, to the barbarism which seems to be spreading so rapidly in Vermont, of using "community" without any modifying term, I would say that I believe its use to be without any legitimate precedent whatever. Hear what Webster says on this subject:

"In this sense [the sense of society at large; a

commonwealth or state, a body politic; the public; or people in general,] the term should not be used *absolutely*, like the word *society*; as, the interests of *community* require this; but, the interests of *the* community," &c.

3. Another writer gives the following question:—
"A, with 5 loaves of bread, and B with 3 loaves, set out to travel, and soon overtake C, who proposes to sit down and eat with them. They consume the 8 loaves, and C pays them 24 cents for what he has eaten. How shall A and B divide the money?"

Solution. If C paid his full share of the value of the bread, the 8 loaves must have been worth 72 cents, or 9 cents each. Now as A contributed 5 loaves = 45 cents, being 21 cents more than his due share, and B contributes 3 loaves = 27 cents, which was 3 cents more than he ought, it is plain that A should get 21 cents and B 3 cents of the money paid by C. Each will then have furnished his due share as follows:

loaves.	cts.	cts.	cts.	cts.
A 5	at	9=	45=	21=
B 3	at	9=	27=	3=
C				24
				72

From Chambers's Edinburgh Journal.

Fireside Games.

"Capping verses" is an old game that seldom fails to please young people who have a good store of poetry in their heads. Then there is, "What is my thought like?"—"How, when, and where did you find it?"—"Proverbs," and others of the kind.

The best of these, as requiring most cleverness to play it well, is, decidedly, "What is my thought like?" This is still a general favorite; and some thirty years ago it was a very fashionable game among the highest classes. If, dear reader, you have been so intently occupied with the *business* of life that you have had no time to become acquainted with such things, ask the first girl of sixteen you meet how people play at "What is my thought like?" and she will tell you all about it; and, unless you are a very dull individual, (which we are loath to believe) she will make you competent to distinguish yourself in the game on the first opportunity. In the meantime, you imagine that in a circle of young, old, or middle aged persons—for the number of our years is of no consequence, if we have only sense enough to enjoy—an individual has conceived the important thought on which the amusement is to hinge. This thought he writes down in secret, and then demands peremptorily of the company, one by one, "What is my thought like?" Who can tell what an unknown thought is like? One replies at random that it is like the table; another that it is like a lamp-post; a third that it is very like a whale; and so on; and when all have answered, the written document is produced, and the thought declared. It is then the business of each of the guessers, under pain of a forfeit, to prove the resemblance he has ventured to suppose; and it may be imagined that some merriment is produced by the striking contrasts and wild incongruities of the two objects. On one occasion, when a party in high life

were deeply engaged in the game, the mystic thought, when disclosed, proved to be "Lord Castlereagh." How could Lord Castlereagh be like a table, or a lamp-post, or a whale? Plutarch himself, one would think, could not have told, capital as he was at parallels; but when Moore, who was among the players, was rigorously ordered to describe the resemblance between his lordship and the thing he had himself named—a pump—the whole company gathered round the poet, eager to witness his discomfiture. Thomas the Rhymer opened his oracular lips without a moment's hesitation, and replied—

"Because it is an awkward thing of wood,
That up and down its awkward arm doth sway,
And coolly spout, and spout, and spout away,
In one weak, washy, everlasting flood!"

But of all these fireside games, the most charming, fascinating, tantalising, and difficult to achieve, is the making of cento verses. In case our readers should not know what cento verses are, we will quote for their enlightenment the following passage on the subject from D'Irasci's 'Curiosities of Literature.'

"In the 'Scriblersaid' we find a good account of the cento. A cento primarily signifies a cloak made of patches. In poetry, it denotes a work wholly compounded of verses or passages taken promiscuously from other authors, only disposed in a new form or order, so as to compose a new work and a new meaning. Ausonius has laid down the rules to be observed in composing centos. The pieces may be taken from the same poet, or from several, and the verses may be either taken entire, or divided into two—one half to be connected with another half taken elsewhere, but two verses are never to be taken together. Agreeably to these rules, he has made a pleasant nuptial cento from Virgil. The Empress Eudisia wrote the life of Jesus Christ in centos taken from Homer, and Proba Falconia from Virgil."

After speaking of such very elaborate performances, we are almost ashamed to offer our readers a few cento verses, the product of our own family circle. But as they may give them a moment's amusement, and will serve as an example of the kind of thing, we will set them down here:—

On Linden when the sun was low,
A frog he would a-wooing go;
He sighed a sigh and breathed a prayer:
None but the brave deserve the fair.

A gentle knight was pricking o'er the plain,
Remote, unfriendly, melancholy, slow;
Gums and pomatums shall his flight restrain,
Or who would suffer being here below?

The youngest of the sister arts
Was born on the open sea,
The rest were slain in Chevy-Chase
Under the greenwood tree.

At morn the black cock trims his jetty wings
And says—remembrance saddening o'er each brow—
Awake, my St. John!—leave all meaner things!
Who would be free, themselves must strike the blow.

It was a friar of orders gray,
Still harping on my daughter;
Sister spirit, come away
Across this stormy water.

Now I dare say it seems a remarkably easy thing to the reader to make a cento verse; we can assure him that it is often a very difficult thing to make a legitimate one; but then it must be confessed that it is extremely interesting and amusing to chase a fitting line through all the poets of one's acquaintance, and catch it at last. Any person who is anxious to try the difficulties of cento verse-making may do so, and greatly oblige us by finding a fourth line to the following. It has baffled our skill and memory many times:—

'When Music, heavenly maid! was young,
'And little to be trusted,'
'Then first the creature found a tongue,'

But if it is difficult to make cento verses, it would seem likewise to be difficult to recognise them when made. We remember hearing John Galt express some dissatisfaction with the verdict of the Edinburgh Reviewers upon his *Five Tragedies*, and more especially the one entitled 'Lady Macbeth.' This verdict some of our readers may remember, went the length of a finding of insanity; and it was no wonder that the author was discontented, since the tragedy in question was, as he assured us, a *cento from Shakespeare!*

In making cento verses, when this is done as a game, the guiding association is the rhyme; but "proverbs" excite the ingenuity, and even require a certain degree of critical acumen. In the absence of an individual from the room, the party pitch upon some well-known proverb, and each person takes charge of one of the words it contains. When the one whose judgment is to be put to the proof enters, he is permitted to ask of each of the company a question on any indifferent subject that may occur to him; and in the answers all must take care to introduce the word they have charge of. If these answers are ingeniously framed, and the proverb is of a reasonable length, the hunt for it is difficult and exciting; but very short proverbs are too easily discerned to afford much amusement. Let us suppose, for instance, that the one in question is, "All is not gold that glitters." In this case the words "all—is—not—that" introduced into the respective answers give no clue; but if the person who undertakes "gold" is not very careful to use it in such a way as to prevent its leaving any impression upon the memory of the questioner, it is easily connected with "glitters," and so "the cat gets out of the bag" at once.

If the mirror in the parlor not only reflected all the objects which are brought before it, but held the images forever which it had once reflected, how careful should we be about exhibiting anger, malevolence, or pride, before it. But something not unlike this is true of all the actions done and words spoken in the presence of children.—*Common School Journal.*

Some one, looking at a rich man said, "Poor man, he toiled all day and night until he was forty, to gain his wealth, and he has been watching it day and night ever since, for his victuals and clothes."

THE AGRICULTURIST.

Writing for the Agriculturist.

If somehow the farmers of Vermont could get up a real horn of talk with each other about their own employments and interests, we are sure they would enjoy it, and profit by it. It is not the conflict of wits only, that sharpens them; it is done quite as well by talk in which the parties agree, provided only that there is the same interest excited. There is intelligence and enterprise among the cultivators of Vermont; and improvements are every day started, which ought to be more rapidly diffused. We only need that habit of writing should become more general.

We have agricultural writers among us whose papers sent to New York and Massachusetts command attention. Some of the papers they have published are exceedingly valuable. In every County of the State, we know from what we have seen, there are men who have written so well that they ought to write more. And yet those who have written are but few in comparison with such who might do it with advantage to themselves and to the public.

We have applied personally to some of the individuals referred to, and the same has been done in behalf of another agricultural paper among us, not now published. We are sorry to say that the applications, except in a few cases, have not been responded to as it seems to us the public interests require.

We now make our application *general*. We ask all our farmers, whether on a large or a small scale, to send us some of their best thoughts,—or statements of such facts as seem to them most interesting. No matter if you are not accustomed to write; no matter if your communication may not have all the “stops and marks” in the right places. For such men we will gladly put things in the right shape. Give us your facts—the history of your crops—your management of your oxen, your dairy, your pigs, your poultry, your bees, your hay, your corn, your potatoes, your fruit trees, your manure,—and whatever else pertaining to the farm may most interest you,—and we will see that they go forth in a proper shape to do good in the world.

Not a few among us are, as they have proved themselves, able to discuss agricultural subjects in the most thorough manner, and to write like a book. We ask such whether it is not worth the while for them, when they see a paper like this, going into some 4000 families in Vermont,—whether they ought not to do what they so easily can, to give it zest and life? Nothing carries home a fact or a thought to those who should profit by it, like its coming from a respected neighbor, or fellow citizen. Here is a paper, by which they may reach thousands of Vermont farmers who will never see what they write for a publication in Massachusetts or New-York. And these are the men who most need the impulse and the guidance of the ablest writers among ourselves. We ask them, therefore, to unite their efforts with ours, to make this sheet a more powerful means of agricultural improvement in our own state.

We have a word to say to one other class—the housewives, the makers of butter and cheese,—of bread and puddings and pies—and of comfortable and thrifty homes—the conservators of the health and the purse and of all happy dispositions—the lovers of neat yards and beautiful flowers—we ask our farmers' wives and daughters to write for our paper on all the subjects that fall within their domain.

The influence of such a paper by no means depends entirely on the extent of its circulation and the ability and industry of its editors. Something more than these—and more than what it may contain, is needed to make it awaken that lively interest without which no one reads to much profit. It should be seen that active minds in the midst of us are contributing to its columns.

Agricultural Papers.

The following extract from the report of Mr. J. G. Chadee, of Wickford, R. I., to the standing committee of the Society for the Encouragement of Domestic Industry, shows the opinion of a successful applicant for a premium on vegetable crops, whom the committee highly commend for his intelligence and correct views.

“I will mention one other mistake that many farmers have fallen into, and some still adhere to it; and that is, an unwillingness to inform themselves in the duties of their calling by reading agricultural publications. New improvements are continually taking place, and an abundance of light, on the subject of agriculture, is flowing from the press in every direction, and at so cheap a rate that every farmer who can read may enjoy its benefits. A man who cultivates two acres of land, will in the course of a year derive more benefit from an agricultural paper than will pay the cost. This I know from experience.—Previous to commencing farming, at the age of three-score, I took an agricultural paper, to aid me in the cultivation of some worn-out land, that I could not rent for four per cent. From that little sheet I gleaned much valuable information; such as the method of composting manure, and the kind best adapted to a particular soil; the advantage of a rotation of crops; directions for selecting the best variety of seeds, with the method of cultivating each kind; and also, frequently cautioned not to improve more land than could be well manured and cultivated to advantage; together with many other suggestions and recommendations, drawn from the experience of practical cultivators. But still there is much published that is of no benefit to a common farmer; but by rejecting that, and treasuring the good, he will find much to aid him in his business. Had I been deprived of that source of information, derived from agricultural publications, during the few years that I have been engaged in my new calling, and have had no other guide to direct me but the example of my neighbors, there is no doubt that I should now be more than a thousand dollars worse off than I am at present; and all for the sake of saving a dollar or two a year.

Improvement of Potatoes.

We have before (vol. I. p. 10) noticed the experiments of Mr. Smith, of Buffalo, for the improvement of the potato. An article on subject by that gentleman will be found in our present number. Mr. Smith, we think, is pursuing the right track, and farmers will find it for their advantage to avail themselves of his labors as may be convenient. His seed, from the balls of his late crop, may be obtained by mail, price 25 cents per package, sufficient to produce, he says, five bushels. Of the seedlings thus obtained, some may reasonably be expected to prove superior. His choice seedling potatoes, of proved kinds—Buffalo Seedlings, Buffalo Pinks, Early Junes, and several other kinds,—are sold at \$2 per bushel, or \$4 per barrel; the quantity ordered being made up of one, or two, or all the varieties, as the purchaser may direct.

Mr. Smith claims that his method makes the potato far more prolific as well as more hardy. His crops are free from disease. See advertisement in the Vermont Chronicle, Cultivator, and American Agriculturist.

GLASS MILK-PANS are sold at 75 cents single; \$8 per dozen. They are made very thick, and will of course last,—till they are broken. They have been in use in England for some years, and are said to be preferred to every other kind.

GRAFTING GRAPE VINES. The late Judge Darling of New Haven, after many failures, succeeded in grafting grape vines thus: The stocks were transplanted at the time of grafting, by which means the roots were broken, and the sap made to flow in another direction, so as not to drown the scion. The same object has been attained by grafting late, when the sap has become too thick to run as in early spring. After the leaves are developed, cut off the stock two or three inches below the surface of the ground, and insert the scion in a gimlet hole, making a tight fit, and replace the earth.

SWINE. A correspondent of the Michigan Farmer states facts proving, as he thinks, that pigs from an old sow will make heavier hogs than those from a young one, all other things being equal. If so, it is a matter of some importance in the economics of pork-raising.

GOOSEBERRIES. The reports that have reached us from Boston, New York, &c., about gooseberries have been unfavorable. And in Vermont the blight has discouraged some who have made trial of cultivating English kinds. But excellent crops are grown among us. We could not ask for better than we have seen in Middlebury and Windsor,—the latter in a sandy loam, and as naked to the sun as possible. With attention to the choice of kinds, we may probably have this excellent fruit in abundance, and with little trouble. The best of foreign origin for us are probably the White Smith and the Crown Bob. Houghton's seedling originated in Lynn, Mass., and

will probably do better with us than either. It is very hardy, exceedingly prolific, the berry uncommonly tender and sweet. It is by no means so large as the Lancashire kinds, which are sometimes grown nearly two inches in diameter. It is recommended to keep the soil moist by a covering of spent tan, or litter.

OVER-LABORING AND UNDER-THINKING. The Working Farmer justly remarks that our industrious farmers have been too apt to over-labor and under-think. It is bad economy to throw an excess of labor upon the body. The mind should have for itself a respite, not so overworn as to refuse service except in the way of brute force. Often a little thought may get twice as much out of a day's work as it ordinarily amounts to; and it is but fair, when it can be done, that the mind should exert itself both for the relief of the body and to make each blow of the arm tell to the uttermost.

Wool Depot Meeting.

WEST LEBANON, April 9, 1849.

The meeting was called to order according to adjournment, at the hotel of Mr. Nash, at 10 o'clock, A. M., and reports were called for from the several committees.

On motion of Mr. Ora Paul of Pomfret, Vt., a committee of six, three from each side of the river was appointed by the chairman, to ascertain the amount of wool which has been subscribed for the purpose of establishing a Wool Depot at West Lebanon, consisting of Mr. Paul of Pomfret, Mr. Cushing of Woodstock, Mr. Lovering of Hartford, Mr. Blodgett of Lebanon, Mr. Smith Morgan of Plainfield, and Mr. Dewey of Hanover. Adjourned until 2 P. M., to the school-house.

Met according to adjournment, and the committee reported: Whole number of fleeces pledged in Vermont, 15,500, supposed to be equal to 46,500 pounds of wool. Whole number of fleeces in New Hampshire, 2,090, equal to 6,279 pounds. Mr. Porter explained the practical operation of the scheme, and was followed by Mr. Cushing of Woodstock, Abner Allen, Zuar Eldridge of Lebanon, Mr. E. T. Miller of Hanover, Mr. Bridge of Pomfret, and others.

On motion of Mr. Ora Paul of Pomfret, a committee was appointed by the chair to nominate eight Directors, four from each State, consisting of Mr. Zuar Eldridge of Lebanon, Mr. Miller of Hanover, Mr. Morgan of Plainfield, Mr. Paul of Pomfret, Mr. Hazen and Mr. Udall of Hartford.

The committee reported the following nomination: Abner Allen of Lebanon, Geo. Dewey of Hanover, Geo. W. Cutting of Lyme, Merritt Farnam of Plainfield, N. H.; John Porter, Esq., Allen Hazen of Hartford, Nathan Cushing of Woodstock, Ebenezer Bridge of Pomfret, Vt.

Voted, to adopt the nomination.

Voted, to excuse Dea. Abner Allen and appoint Col. Clark Hough of Lebanon, to fill his place.

Col. Clark Hough of Lebanon, introduced the following resolution which was unanimously voted.

Resolved, That the Board of Directors shall have the supervision, direction, and control of the Depot and the business thereof,—may appoint agent or agents as they shall think best, but shall not delegate to such agent or agents, any powers herein vested in them.

Voted, That the proceedings of this meeting be published in all the newspapers in Grafton county, N. H., and Windsor county, Vt.

Voted, That the Board of Directors have the power to fill all vacancies which may occur in their number.

Voted, to adjourn.

JOHN PORTER, Esq., Chairman.

JOEL BAKER, Sec'y.

The Garden.

"But it takes so long for them to come into bearing!" Dear reader did you ever know an individual that complained of its taking so long for a tree or a bush to grow, that was proverbial for success in any thing?

We have known two individuals, educated at the same school, and settled in the same neighborhood. One of them, Mr. A., in the days of his boyhood was forcibly impressed with the beauty of a well conducted garden; but when he tasted of its delicious fruits and vegetables, his admiration ran so high, that he resolved on having a garden of his own. His first labor was to eradicate the pigweed and beggar-louse in the premises where his father had planted "potatoes and a few cabbage," and then, by a thorough mauling, ploughing, and laying out, to prepare the ground for future operation. Asparagus, currant, gooseberry, and raspberry bushes were introduced, when convenience aided the operation; that noblest of all substitutes for a good apple pie, the rhubarb, was planted in a rich niche; the strawberry, too, claimed a place both for variety and luxury; and after being properly cared for only two short years,—a period which to most men, and especially the can't do's and can't waits of the world, look in the retrospect as a dream, a period of which they have an indefinite recollection,—all these things were in maturity, and amply, yes, in a thousand fold, repaying all the cost and labor bestowed upon them.

So, too, with vegetables. Early potatoes were introduced to take the place of the tardy "long Johns;" and though the cabbage plat received due consideration, the broccolis and cauliflowers came in to claim a share of merit by its side. Indeed, every comfort, every luxury a garden can afford, in two years from that annihilation of grass and unseemly weeds, found a place there. In consequence, better health was the result of this increase of comforts, and cheerfulness and hilarity of spirits, took the place of moroseness and turbulence of feeling. And do you suppose that a great demand on the young farmer's time was created by this new accession of the useful and beautiful? Time it certainly does require to nurture and bring so fine an array of plants to maturity as young farmer A. now possessed; and so it requires time to secure and attain any valuable object. But the time necessary to cultivate a garden may with most farm-

ers be made up of the thumbs and odd ends of other employments; and a man of persevering energy will accomplish much, almost produce a new creation in the odd spells which others will spend in folding their arms and whining because it takes so much time to accomplish any thing.

W. B.

April, 1849.

[N. E. Farmer.]

Charcoal on Flowers.

The following extract cannot fail to be interesting to the botanist and the chemist, as well as to every lady who has a rose bush in her garden, or a flower-pot in her parlor. It is from the Paris, "Horticultural Review" of July last, translated by Judge Meigs, of New York, for the Farmer's Club of the American Institute. The experiments described were made by Robert Beraude, who says:—"About a year ago I made a bargain for a rose-bush, of magnificent growth, and full of buds. I waited for them to blow, and expected roses worthy of such a noble plant, and of the praises bestowed upon it by the vender. At length, when it bloomed, all my hopes were blasted. The flowers were of a faded color, and I discovered that I had only a middling multiflora, stale enough. I therefore resolved to resort to some experiments which I had in view. My attention had been captivated by the effects of charcoal as stated in some English publication. I then covered the earth in the pot, in which my rose bush was, about half an inch deep with pulverized charcoal! Some days after, I was astonished to see the roses, which bloomed of as fine lively rose color as I could wish! I determined to repeat the experiment; and therefore, when the rose bush had done flowering, I took off all the charcoal and put fresh earth about the roots. You may conceive that I waited for the next spring impatiently, to see the result of this experiment. When it bloomed, the roses were, as at first, pale and discolored; but by applying the charcoal as before, the roses soon resumed their rosy red color. I tried the powdered charcoal likewise in large quantities upon my petunias, and found that both the white and the violet flowers were equally sensible to its action. It always gave great vigor to the red or violet colors of the flowers, and the white petunias became veined with red or violet tints; the violets became covered with irregular spots of a bluish or almost black tint. Many persons who admired them thought that they were new varieties from the seed. Yellow flowers are (as I have proved) insensible to the effects of charcoal."

AGE OF SHEEP DETERIORATES THEIR WOOL. It has been observed, by the most experienced wool-growers, that the older the sheep the less fine the wool. The wool is said to be of the best quality when the sheep is from two to five years of age; after that it deteriorates. Mr. Blanchard of New York, states that he has known flocks that yielded wool that sorted number one when young, when older drop down to number two or three.

Those who wish to grow the first grade of wool should keep young sheep. Some go so far as not to use a buck after he is four years old.

Culture of Grapes.

A correspondent of the *Cultivator* gives the following account of the results of thorough culture in native grapes:—

"The deep and rich borders, always prepared for vineries, of foreign grapes, your readers are familiar with; and the magnificent growth of wood and enormous clusters of grapes, that are obtained by using such stimulants. I think equally satisfactory results may be obtained by making deeply prepared borders for the native grapes. Of course, I now refer to vines planted for table use; as it is well known that in planting vineyards for wine the quality of the juice is the only point to be considered; for in that case, high manuring always injures the vinous quality of the fruit.

I have four Isabella vines, which have given me, for two years past, fruit nearly as large as those of the Black Hamburg, and of very fine flavor. Perhaps it may please some of your readers to know the treatment they have received.

They stand in a border, 12 feet wide by 30 feet long. I prepared this border by throwing out all the soil and subsoil to the depth of three feet. The bottom was then filled up with stones mixed with half *lime rubbish*, (from the walls of an old house,) one foot in depth. Throwing away all the subsoil, I then mixed with the good soil 10 cart loads of stable manure, 2 barrels of bone dust and a cart load of leached ashes. With these all incorporated together, the border was made complete by filling up the remaining 2 feet upon the stones and rubbish in the bottom.

*The vines were planted 6 feet apart, and trained to an upright trellis.

I was astonished at the gigantic shoots which they made the second and third years. The shoots were some of them 24 feet long, and as thick as my thumb. I pursue the simple spur mode of pruning, and obtain regular and heavy crops. Some of the bunches weighed a pound and a quarter last year; and the berries were so large that many persons who saw the fruit, would scarcely believe that it was the same variety as the common Isabella grape. So much for the effect of high culture."

Shaker Butter:

The Farmer's Monthly Visitor contains the following directions for making sweet butter; furnished by one of the Sisters in the First Family at Canterbury:

DIRECTIONS FOR MAKING SWEET BUTTER. The pans or other vessels in which the milk is to be set should be made perfectly sweet by scalding previous to putting the milk into them. A room in the basement story where the air will circulate freely is preferable to a cellar (when the weather will admit of it) for setting milk. Forty-eight hours is a sufficient length of time to raise cream for making butter to keep through the winter season.

After this cream is taken off, the milk may stand the same length of time, but the cream that rises after the first forty-eight hours will not make butter so

palatable as the first which rises, and should be churned separate.

As soon as the cream is taken from the milk, it should be put into a tin pail and set into a kettle of scalding water, taking care to stir the cream often, otherwise it will turn oily at the top; it should remain in the kettle till the cream is scalding hot, being particular to place it in a tub of cold water immediately. Stir it often till it is nearly or quite cold; if it remains long after hot, it will be injured much. It will be necessary to change the water once or twice before the cream can be perfectly cold. It may then be kept three or four days before churning, without injury.

After churning, the buttermilk should be partially worked out; then add one and one-half ounces of salt to one pound of butter. It may then be covered tight and stand till the following day: then work it over again, taking great care to work out every particle of buttermilk, which will prevent the butter from growing rancid by age. It may then be formed into cakes or packed solid in a cask, which should be perfectly sweet and well dried.

The inside should be sprinkled and a little fine salt rubbed thereon. After the cask is filled, dip a cloth in melted butter, and spread it snugly over the top—cover it with fine salt, and fasten up the cask sufficiently tight to keep out the air; it should then be set in a cool place to remain through the winter.

N. B. A cask made of red oak staves is preferable to any other for preserving the original sweetness of butter.

It will add to the flavor of butter to work in a little sugar at the last working over; say a table spoonful to four or five pounds of butter.

From the Cultivator.

The Cultivation of the Potato.

EDITORS CULTIVATOR:—My own experience of eight years with the potato, have very much encouraged me to continue the alternate culture of seed and its seedlings, with careful selections.

The process does materially improve the potato in new and excellent varieties—in health and productiveness. At the same time, much depends for success, upon a proper situation and preparation of soil, manner of cultivation, time of planting, lifting and good storage.

Good upland soil, deep thorough plowing, early planting—with well cultivated approved seedling varieties, in shallow drill, early weeding, light hilling, early lifting, and dry air storage, does more for the redemption of the potato from disease, than all the nostrums the world can devise.

Potato seed, though it produces generally several different varieties in its seedlings, will not be likely to produce varieties or qualities with which it has no connection. If new and choice varieties be expected from sowing the seed, care should be taken to obtain seed from good varieties, or in the immediate neighborhood of the same.

Seed from the balls will transmit from a diseased

stock, in some degree, that disease to its seedlings, to some varieties more than others.

Some have gathered balls from anywhere, without regard to the character of the stock, planted the seed, and finding in the seedlings disease and inferior specimens, abandoned at once the experiment, and in their judgment, seedling potatoes are no better than old ones.

The same laws that govern the apple, peach and strawberry, in their culture, for new and choice varieties, govern also the potato. If a new, choice seedling apple, pear or strawberry be desirable, why not a new and excellent potato? But neither is to be obtained without the use of their seed, and may be not without a series of experiments, with careful selections.

Potato seed, from properly selected, well cultivated seedlings, combining through the seed the best varieties at home and from abroad, is among the most valuable seeds to be found in the market.

Potato seed may be sown like the tomato, early in hot bed for an early crop; or like cabbage in a rich bed in warm place, and transplanted; or with a seed planter in the fields, with great profit, or broadcast, on a rich fine soil, and lightly harrowed in, with no other cultivation, and the crop of young seedlings, the very best, for planting the next season.

Early sowing the seed and early lifting, gives the potato a tendency to early ripening. Lifting the potato before it has perfected its growth, it is found drier in cooking, will keep better through the winter, vegetate earlier in the spring, and become more hardy in its constitution.

Medium sized potatoes cook better, of finer quality and flavor, will plant more ground by the bushel, and are exempt from disease.

Nipping off the weeds just below their roots, soon as their appearance, is a better remedy for the potato disease than nipping the vines.

My crop of the last season, combining all my best varieties through the seed from home and abroad, is good—exempt from the prevalent disease, productive, and developing, from the seed obtained not long since from different parts of the world, Prussia, England, South America, Mackinaw, and other places. varieties promising a valuable acquisition to the potato market. The crop of about 1400 bushels shows distinctly in its healthy and strong foliage, loaded with balls, its strongly marked and distinct varieties, and the increase of new varieties of fine appearance, the benefits of the progressive alternate culture.

Buffalo, Jan. 4, 1849.

N. S. SMITH.

MANURES. Lose no opportunity in hauling out manure, in order that there may be no hindrances in spreading and plowing it in, previous to planting, or sowing your seeds. Should it be necessary for it to lie in heaps in the field, or to be spread on the surface long before it is plowed in, it would be preferable that a little plaster were scattered over it, in order to fix the ammonia and prevent its escape. Neither lime nor wood ashes should be applied with guano nor with any other animal manures, as they both will

liberate the ammonia contained in them, and cause it to be lost; but the lime and ashes should always be mixed together, as the former will disengage the potash from the latter, which will then be more prompt and energetic in its effects. Quick lime, caustic lime, or hot lime, as it is sometimes called, should never be applied directly to composts, manures, nor to the soil, except in cases where organic acids and much crude vegetable matter abound. Lime is best applied in composts having for their basis a large proportion of vegetable matter, as peat, or swamp muck, turf, rotten wood, decayed leaves, straw, &c. It should first be thoroughly slacked, and directly after incorporated in the compost.—*Am. Agriculturist.*

ASHES ON GRASS. S. R. Gray, of Salem, N. Y., sowed in the autumn of 1845, 25 bushels of unleached ashes on two acres of meadow, on a western hillside, which had been mown for 30 years. The crop of hay was increased from half a ton per acre to a ton, and the second year to a ton and a quarter.

Potatoes, versus Corn.

The greatest difference imaginable prevails even among practical men, regarding the difference in value between the potato and the corn crop, when both are fed on the premises; a late writer making it appear by figures, that the culture of the former, as a general crop, would make a difference in the saving to the country, of no less a sum than one million six hundred thousand dollars yearly, while an opponent proposes to make it appear from his own showing, that corn is sixty per cent. better than potatoes, the expense of culture of both being the same. And it will be admitted that in the culture of corn there are considerations of much weight, present, as well as future, for in the purchase of seed per acre, while the corn necessary may be had for about a shilling, potatoes at fifty cents per bushel would amount to \$12,50 for the same quantity of land. And then in the value of the fodder—that it is the practice to cut it up by means of machines there will be found about the same; say therefore, \$25 per acre in favor of corn; after which comes the large amount of home made manure, and the opportunity afforded of sowing turnip seed amongst the corn at the time of its last hoeing; or clover, if thought preferable, which will be properly appreciated by those accustomed to the practice; the turnips alone having often brought the price of 25 cents per bushel at the market, or a considerable portion of that sum, when fed to cattle in winter.

It has been found that seven bushels and a half of corn will go as far as thirty bushels of potatoes in the fattening of hogs, this quantity being sufficient for a hog of one hundred and sixty pounds weight, but the potatoes will require preparation by cooking or some other ingredients mixed with them, before they can be made at all equal to corn for this purpose; this extra labor and cost must, therefore, be added to the value of the potato, and will be found a serious item in the account. It will also be admitted, that the value of the manure from corn-fed hogs will

be far more than that obtained from those potato fed. And then comes the question, will not the flesh of the corn-fed hog be of more value, both in the family and in the market, than that potato fed.—*Farmer and Mechanic.*

Distance Table for Planting, Etc.

The following table will assist the agriculturist in calculating the number of plants or trees which may be placed on a given piece of ground at any distance apart. It may, also assist him in the proper distribution of manures, division of beds, &c. An acre of ground contains 43,560 square feet. An acre will contain, at these distances apart:

Feet.	Plants.
1	48,560
1½	19,360
2	10,890
2½	6,969
3	4,840
4	2,722
5	1,742
6	1,210
9	537
10	435
12	302
15	193
18	134
20	108
21	98
24	75
25	69
27	69
30	48
40	27

Covering the Soil about Fruit Trees.

I have noticed with interest the remarks of Mr. Cleveland and others in this journal on the subject of covering the surface of the soil with substances to keep it of a uniform state of moisture, &c.

I will add my mite in favor of this process. I adopted the same plan last spring, covering the ground with straw two inches deep, laying it down smoothly and closely between the trees, for a space as large in diameter as the spread of the branches.

The result has so far exceeded my expectations, that I am tempted to believe that there must be some stimulating as well as protecting influence in the straw. I have gathered from a few quince and plum trees (the only ones to which the application was made) fruit of nearly double the size of that from other trees in the same soil; and the plums held their fruit better than I ever had before on my premises. Yours, A CONSTANT READER.

Philadelphia, Jan. 1849.

[*Downing's Horticulturist.*]

MARKING SHEEP. An agriculturist says, I wish to impress it upon every one who keeps a flock, if not more than half a dozen, that Venetian red is the best thing that I ever saw used to paint-mark sheep. It is, as most all know, a cheap red paint, only a few

cents a pound, and one pound will mark a thousand. Take a pinch of dry powder, and draw the thumb and finger through the wool upon the particular spot you would mark, loosing the powder at the same time, and it will combine with the oil of the wool, and make a bright red mark that rains will never wash out, and which will endure from one shearing to another, but does not injure the wool. It is readily cleansed out by the manufacturer.

A Game at Definitions.

Mirror—A smooth acquaintance, but no flatterer.

Child—God's problem waiting man's solution.

Ignorance—A dark place, where poor people are allowed to grope about till they hurt themselves, or somebody else.

Shop—An arena prepared for combats between avarice and parsimony.

Politics—A national humming-top, which spins the least when it hums the most.

Ball-room—A hot-house for growing artificial manners.

Pedantry—Intellectual tight-lacing.

Superstition—The swaddling clothes worn by Society in his cradle.

Letter—A speaking-trumpet, through which the voice may be heard at any distance.

Money—The largest slaveholder in the world.

Pride—Something deducted from your estimate of others to add to your estimate of yourself.

Pauper—An animal so like man as to make us feel uneasy.

Policeman—A person hired by careless gardeners to collect weeds.

A GREAT NURSERY. Perhaps the largest nursery in the world, is Booth's in Holstein, one of the Danish provinces. It consists of one hundred and eighty acres, and requires on an average, one hundred and thirty men and twenty women to cultivate it. Eighty packers are employed during the packing season.—The average profit, for the last thirty years has been \$15,000 annually, though at one time for twelve years, the sale of dahlias alone netted \$50,000 per annum, and to which eleven acres are still devoted. Some rare Orchideous plants sell for \$300 each.—Of this family of plants they have two thousand varieties, and two thousand of the dahlia. The collection of ornamental trees is enormous.

RAISE MORE FRUIT. When Dr. Dwight first removed to New Haven, there was but little fruit raised there. He urged his neighbors to plant fruit trees, but they said it was of no use, for the boys would steal all the fruit. "Plant more fruit," was the answer—Make good fruit plenty, and it will not be plundered. Fifteen years afterwards, he pointed to the abundance of fruit and the absence of pillage then enjoyed, in proof of his principle.

PROFITS OF APPLE ORCHARDS. The American Agriculturist says.—A gentleman having less than seven acres of orchard, realizes from \$500 to \$750

worth of apples annually. In another exchange paper it is said, an old orchard of four or five acres, that had not been ploughed for thirty years, and was said to be worthless, was ploughed and manured, and the third year thereafter produced two hundred and eighty barrels.

MONSTER APPLE TREES. There is an apple tree on the estate of Mr. Joseph Briggs, on Federal Hill, in the town of Dedham, supposed to be about one hundred years old, which measures thirteen feet and a half in circumference one foot from the ground, and eleven and a half feet four feet from the ground. Its branches cover an area of about sixty feet in diameter. This tree is second only to that in Duxbury, which is sixteen feet in diameter a foot or two above the surface of the ground, is over one hundred years old, and bore in one year fruit which made ten barrels of cider, in addition to thirty barrels of apples put into the cellar.—*Traveller.*

A NATURAL BIRTH REGISTER. When a native of Java has a child born, he immediately plants a tree, which, adding every year a circle of wood to its trunk, indicates the age of the tree, and therefore that of the child. The consequence is, the child regards the tree with reverence and affection as long as he lives.

CULTURE OF THE BLACKBERRY. Having seen an inquiry respecting the culture of the blackberry, I will send you the method which is practiced by a friend of mine, who has a beautiful hedge which produces a great abundance of this excellent fruit.

The plants are set out in rows four or five feet apart, and are kept free from weeds and grass through the summer; in the fall these spaces are filled with leaves from the forest. The next spring a quantity of ashes is strewn between the rows—these with the leaves are all the means used to secure a beautiful harvest every season. W. H.

West Bethel, Vt., March 28th, 1848.

TREES AND VINES which are kept the cleanest bear the best; like the human body, the pores of their skin become clogged with dirt, and retain gasses which should escape. Trees, the bark of which has been scraped and scrubbed, become more thriving and vigorous.

PATENT WAGON. Mr. Start, of Smyrna, Delaware, has made an improvement in manufacturing wagons, which will certainly be a great advantage to the farmer, inasmuch as it will effect a great saving in labor. The bed of the wagon is placed on rollers, fixed in the frame work on which it rests, and in front is a fixture for a lever by which a lad can run the wagon bed back, and shoot its contents on the ground. It would seem that this wagon can be introduced to great advantage among those who haul fresh lime or manure on their farms, as they can at once discharge the load just as readily as they can that of a cart, thereby saving, where the load is lime, an hour's work or more. Old wagons, at a slight expense, say some ten or fifteen dollars, can be rigged on this plan.

It was exhibited at the New Castle County Cattle Show, and was highly spoken of by the gentlemen who examined it.—*Farmer and Mechanic.*

GROWING FARMERS. Three things are essential to the growth of a farmer, in addition to hard work—which is common. They are Inquiry, Reflection, Attention. And the greatest of these is ATTENTION.

The Markets.

BRIGHTON MARKET, Thursday, April 26.

At Market 470 Beef Cattle, 30 yoke Working Oxen, 35 Cows and Calves, 750 Sheep, 4800 Swine.

PRICES—Beef Cattle—We quote—Extra \$7; first quality 6 50 a 6 75; second 6 a 6 25; third \$5 25 a 5 60.

Working Oxen—Sales at \$72, 78, 80, 95, and 115.

Cows and Calves—Sales at \$23, 27, 30, 33 and 42.

Sheep—Small lots at \$3, 3 75, 4 25, and 5.

Swine—Lots to peddle 4, 4½ and 4¾ for Sows, and 5, 5½ and 5¾ for Barrows; old Barrows 4½ and 5c. At retail from 5 to 7c.

WOOL. No change in prices, with sales 50,000 lbs. domestic, at the quoted rates. 120 bales Smyrna, price not public; 20,000 a 30,000 lbs. Buenos Ayres, superior, about 18c per lb. 6 mos.

Prime Saxony Fleeces, washed, lb.	42	a	45
American full blood, "	37	a	40
do ¾ "	35	a	37
do ¾ "	32	a	35
do ¾ and com. "	28	a	30
Smyrna, washed, "	16	a	22
do unwashed, "	8	a	14
Bengasi, do "	7	a	9
Buenos Ayres, "	8	a	20
Extra Northern pulled lamb, "	38	a	40
Super do. do. do. "	33	a	35
No. 1 do. do. do. "	29	a	31
2 do. do. do. "	23	a	25
3 do. do. do. "	15	a	16

—*Boston Courier.*

BOSTON, Friday, April 27. Flour—In good demand; sales of Western, round and flat hoop, good common brands, at \$5 a 5 12½. Genesee, common, at \$5½ a 5½, and Southern descriptions at \$4 87 a 5 per bbl, cash, the favorable advices by the steamer giving a little more firmness to the market.

Grain—The market is firm for Corn at 58 a 59c for yellow, and 53c for white, with a fair demand. Northern Oats are selling at 40 a 41c, and Eastern at 37c per bushel, cash.—*Traveller.*

FANEUIL HALL MARKET.

WHOLESALE.							
Beef, fresh, lb.	7	a	14	Apples, barrel,	2 50	a	3 00
Mutton, 1st qual.	5	a	6	do. dried, lb.	0 00	a	0 09
2d "	3	a	6	Beans, bush.,	1 50	a	1 75
Lamb,	4	a	8	Peas, bushel,	0 00	a	0 00
Veal, lb.	6	a	8	Potatoes, barrel,	2 00	a	3 50
Pigs, roasting,	1 00	a	1 22	Common,	0 00	a	0 00
Chickens, lb.,	10	a	12	Onions, bush.,	00	a	1 00
Turkeys,	10	a	12	SEED—RETAIL.			
Geese, mongrel,	1 25	a	1 50	Clover, North, lb.	13	a	14
Pigeons, dozen,	1 00	a	1 25	Southern,	8	a	9
Pork, per 100 lbs.	7 00	a	8 00	White Dutch,	20	a	25
Lard, best, pr. bbl.	7 00	a	7 50	Lucerne, or French,	33		
Western, keg.	7 75	a	8 50	Herdgrass, bush.	3 25	a	3 50
Butter, lump, lb.	16	a	20	Red Top, bushel,			
do. firkin,	15	a	20	Northern,	1 25	a	0 00
Cheese, new milk,	7½	a	8	Southern,	65	a	88½
do. four meal,	5	a	6	Orchard Grass,	—	a	2 00
Eggs, doz.	00	a	13	Fowl Meadow,	2 50	a	0 00

Six Reasons for Planting an Orchard.

BY EDSON HARKNESS.

1. Would you leave an inheritance to your children?—plant an orchard. No other investment of labor and money will in the long run pay so well.

2. Would you make your home pleasant—the abode of the social virtues?—plant an orchard. Nothing better promotes among neighbors a feeling of kindness and good-will than a treat of good fruit, often repeated.

3. Would you remove from your children the strongest temptations to steal?—plant an orchard.—If children cannot obtain fruit at home, they are very apt to steal it; and when they have learned to steal fruit, they are in a fair way to learn to steal horses.

4. Would you cultivate a constant feeling of thankfulness towards the Giver of all good?—plant an orchard. By having constantly before you one of the greatest blessings given to men, you must be hardened, indeed, if you are not influenced by a spirit of humility and thankfulness.

5. Would you have your children love their home; respect their parents when living, and venerate their memory when dead; in all their wanderings look back upon the home of their youth as a sacred spot—an oasis in the great wilderness of the world?—then plant an orchard.

6. In short, if you wish to avail yourself of the blessings of a bountiful Providence, which are within your reach, you must plant an orchard; and when you do it, see that you plant good fruit. Do not plant crab-apple trees, nor wild plums, nor Indian peaches, nor choke pears; the best are the cheapest.

Pork in Middlefield, Mass.

MIDDLEFIELD, Jan. 3, 1849.

MR. HAWLEY: Below I send you the weight of a few of the pigs raised in this town the past year, believing that it will be hard for any town to beat it, in number, age and weight. The amount stated is what they weighed after they were dressed and ready for salting. It will be remembered that this is not a grain-growing town, but we raise wool, and hogs "wont eat that, no how."

By whom raised.	Age in days.	Weight.
B. Ward,	298	302
"	298	362
S. E. Combs,	295	329
Matthew Smith, Jr.,	266	330
"	266	336
Milton Combs,	291	345
"	291	357
Charles Smith,	288	361
Ambrose Loveland,	293	341
"	293	397
Milton Smith,	266	321
"	266	399
Orren Smith,	291	416
"	291	432

Whole weight of 14 pigs, 5,038 lbs., averaging 360 each. Who can beat the last two?

Now for a few of the hogs: Daniel Root's, 404; Harvey Root's, 407; Sewell Gamwell's, 450; Am-

brose Smith's, 462; Russell Pease's, 518; Harvey Root's, 18 months old, 669!

S. F. R.

[Hampshire Gazette.]

If the Hampshire Gazette will get from its correspondent more information about these Middlefield pigs, possibly the raisers thereof may have customers from the north when our *River Line* is completed. Sundry Vermonters would like to be acquainted both with the breed and with the ways and means.

Domestic Economy.

AN ECONOMICAL PUDDING. Take a large, coffee cup of Tapioca or Sago, soak it in a quart of cold water, add a cup of sugar, a little salt and cinnamon or nutmeg and lemon peel, and pour this on 7 apples nicely peeled and cored, and placed in a pudding dish; bake this and you will have not only a very cheap, but a very delicious pudding.—*Traveller.*

TO BAKE APPLES. Take sour apples, those of a keen acid—and to every square tin filled with them, pour over a tea-cup full of water, and one tea-cup full of sugar. Bake them slowly till done. Eat them with cream and the juice that oozes from them. No body knows much of baked apples who has not eaten them in this way. No quince, pear, peach, or plum preserves equal this simple desert.—*Prairie Farmer.*

TO CLEAN CARPETS. Before proceeding to sweep a carpet, a few handfuls of waste tea leaves should be sprinkled over it. A stiff hair broom or brush should be employed, unless the carpet be very dirty, when a whisk or carpet broom should be used first, followed by another made of hair to take off the loose dust. The frequent use of a carpet broom soon wears off the beauty of the best carpet.

IMPROVEMENT OF BREAD. A $\frac{1}{2}$ oz. of carbonate of magnesia added to the flour, for a 4 pound loaf, materially improves the quality of the bread, even when made from the worst new seconds flour. (Professor E. Davy.) This addition is perfectly innocent.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy,	- - - -	50 cents.
5 copies, sent to one address,	- -	2 00
10 " " " " "	- -	3 00
16 " " " " "	- -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

SCHOOL JOURNAL

AND VERMONT AGRICULTURIST.

Vol. III.

WINDSOR, VT., JUNE, 1849.

No. 2.

THE SCHOOL JOURNAL.

⌘ Though the following Circular is addressed by its author to "Teachers in Windham County," we gladly recommend it to "Teachers in Vermont."

A Circular to Teachers in Windham County.

To those who are about to engage in teaching the summer schools, I wish to make a few suggestions.

1. Endeavor to make your school pleasant and attractive. Greet the children, in the morning, with a smiling face and kind words, especially if they come early. Speak to them about their plays, their work and their studies; about the singing birds, the flowers, the woods and fields, that look so pleasant in summer. If possible, make the school so attractive that no scholar will wish to be absent or tardy a single day. There are flowers enough, of all kinds, up the hill of science, to make it the most agreeable place in the world for children, if teachers will only find these flowers and point them out to their pupils.

2. Have order in your school; order in studies and recitations, in going to and from classes, in entering and leaving the school-room. Let the teachers observe order in putting away their hats, bonnets and shawls, and in the care of their books and desks. Let there be order too, as opposed to whispering, loud study, noise and confusion. I have visited schools in New York, of 400 pupils, where there is less noise and confusion than in some schools of 30 or 40 I visited last winter. The best schools, like the best machinery, move on with least noise. The small scholars should have frequent recesses, and be often amused and exercised; but they can learn order, and love order if they learn it.

3. Endeavor to interest your scholars in study. Unless you can do this, however much you know, you are poor teachers. A dull school will be a poor school. For a teacher to try to learn scholars who are not interested is like a blacksmith trying to make nails out of cold iron. There is too much hammering of cold iron in our schools, a great deal of hard work and but little brought to pass. To interest your scholars, let them learn well what they learn, and review often. Ask interesting questions (or some questions) not found in the book, to sharpen the intellect, wake up ideas, and make dull eyes bright. Be interested, lively and zealous yourselves, if you would have your

scholars so. A sleepy teacher will have a sleepy school. To wake up your scholars, you must be awake yourselves. If scholars are not interested, however, the fault may be in themselves, or in their parents, who allow their children to stay at home, and find fault with the teacher. Idle, fretful girls, too, often complain that the teacher does not interest them, when the only trouble is, they do not like to study, or behave well either.

4. Pay attention to the morals and manners of the pupils. The law makes it your duty to give instruction in 'good behavior,' and it is as necessary that children be taught 'good behavior' as to be taught to read, write or cypher. When the Bible is read, and I hope it will be read in every school in the County, let it be read with that respect which becomes the word of God. The most interesting as well as useful lessons in history, biography and ethics are found in the Bible, and a skilful teacher will make use of these lessons in awakening the intellect, cultivating the feelings, and forming the principles of her pupils. If you are only disposed, you will find opportunity enough without preaching sermons, to teach your pupils to speak the truth, to honor their parents, to love their country, to forgive injuries; to be neat, industrious, punctual, temperate, contented and cheerful; to be respectful to their superiors, kind and amiable in their deportment to each other. You can do much to discountenance the germs of pride, vanity, pertness, sauciness, rudeness, vulgarity and selfishness, and to encourage the opposite virtues. You are, in a measure, responsible for the character of your pupils; for, next to parents, you have the greatest influence in forming their characters.

5. Be circumspect and exemplary in your own conduct. It is not enough that you merely avoid doing any thing scandalous or reproachful, for teachers of the young should be examples of what is excellent and praiseworthy in young ladies. You should yourselves be examples to what you wish your scholars to be. It is a shame for the lady, (who should as an instructor of youth, be an example of propriety to the young misses she instructs) to conduct in such a manner as to forfeit the confidence of respectable people, so that mothers may caution their daughters against the example of the teacher! Not that you can always escape censure or reproach, be wise and prudent as you may be; for there may be some who

will misunderstand, magnify and pervert what you do and say, making you "offenders for a word," and abusing you the more when they see there is no reason for their abuse. But however much you may be misunderstood, slandered and abused, "let patience have its perfect work," exercising that "charity which suffereth long and is kind, beareth all things, believeth all things, hopeth all things, endureth all things.

6. Strive to awaken an interest in education where you teach. An enterprising teacher can do this in many ways, and thus accomplish a great amount of good. I could speak of female, as well as male teachers who, during the past winter, were instrumental in arousing parents from their indifference, and in exciting a deeper interest in common schools among all classes of people. Such efforts too, benefit yourselves as well as others. But to awaken such interest, as well as to teach a good school, you should be well informed in regard to schools. Every teacher should have at least one work on school keeping, such as Page's Theory and Practice of Teaching, or the School and School Master. Back volumes of the School Journal too, may be had for 25 cents each. I wish every teacher in the county would take the School Journal and try to increase its circulation where they teach. Young teachers are not sensible how much advantage they may derive from the valuable hints in this Journal. The year commences in May. Will you not send for the Journal?

I would recommend all teachers to keep a record of the attendance of the scholars, tardiness and absences, to be read at the close of each week, and also at the EXAMINATION OF THE SCHOOL. By all means have an examination at the close of your schools, and get out as many as you can to attend it. In spelling, strive to break up the bad habits, prevalent in some schools, of spelling the words by naming the letters, without pronouncing the syllables. In reading do not hurry through the book, but read a few pieces over and over till they are read well. Let the scholars occasionally read in the newspaper, and ask them questions in regard to the geography of the places they read about. In geography, let the scholars draw maps on the black-board where there are no outline maps; and occasionally, let the whole school recite the classifications in concert, and also join in other general exercises to keep them awake. The black-boards is not used half enough in our schools. Pay special attention to the bashful and backward scholars. I would recommend you to encourage the study of history and physiology in your schools.

In conclusion, I wish you all success in your schools this summer. There is no more interesting or noble work than that of forming the youthful mind, if you do it well. May you receive, each of you, the reward of grateful scholars and grateful parents, and, above all, the assistance and the reward of your Father in Heaven.

Wardboro, May, 1849.

J. TUTTS.

MOTIVES. An experienced Teacher names the following as motives to which the teacher may appeal

as excitements to exertion, and auxiliaries in the formation of character:—1. Love of approbation; 2. Love of knowledge; 3. Love of truth; 4. Love of advancement; 5. The pleasure of exercising the generous affections; 6. The desire of preparation for the duties of life; 7. The desire of self-approbation; 8. Desire of the favor of God.

Attendance.—Evidence of Improvement.

The attendance upon the summer schools of 1847 would be appropriately embraced and noticed in this report. But the general facts pertaining to these schools, so far as returns had been received, were made public the last winter, through the medium of the "School Journal." And as the returns, received since that time, do not essentially vary the results then exhibited, it is deemed unnecessary to present them anew here. It will suffice to say, that these returns exhibit, for each school, an average daily attendance of 16 scholars of school age, and an average aggregate attendance of 25; being, for the districts reported, as compared with the attendance on winter schools, nearly in the ratio of 5 to 6. It appeared, however, that these returns, which were from but a small number of schools,—about 400 only,—were from a favorable class; and it is believed that 4 to 5 would express the ordinary ratio of attendance on summer and winter schools, more nearly than any other numbers. But, in any case, it is certain that the attendance in winter is considerably larger than in summer,—a class of older pupils coming into the winter schools, in addition to those attending the summer schools. And, therefore, such comments as are to be made on the general subject of attendance, will be made in connection with an exhibition of the attendance on winter schools.

The returns of these schools exhibit a marked improvement since the previous year in the regularity of attendance,—if, indeed, we may be allowed to speak of improvement, while the evil in this respect is still so great. In 604 districts, in which 20,629 scholars attended school more or less, the average number in daily attendance for the whole length of the school, was 14,735; being about 71 per cent. of the whole number. The returns for the previous winter exhibited an average daily attendance of only 67.6 per cent. of the whole number attending. Or, to state the matter in another form, the average number of days that each scholar attended school, the last winter, was 50, out of the 70 days constituting the average term of time for which the schools were taught. The winter previous, it was 47 days out of 70; and the winter still preceding, it was but 45 days out of 68. This shows a gradual improvement for each successive year,—small, it is true, yet distinctly appreciable.—State Supt. Report.

WAGES OF TEACHERS. They ought, it is said, to be higher. Very true; but they will never be raised by saying that, or by anything of the kind. The most powerful influence that can be exerted in favor of higher wages, is that of teachers who earn more than they receive. And the greater the disproportion

is—the more the services surpass the value of money received as payment, the stronger the influence in favor of high wages. Some teachers are so successful, that many of the parents would gladly double their wages. The district may not be quite ready to do it; but they make an impression on some, and the feeling spreads, that such services are cheaply purchased at any price.

Has Vermont Degenerated?

The opinion is confidently entertained by intelligent and observing citizens of the state, whose opportunities for judging in the premises have been peculiarly favorable, that as one result of past neglect, already apparent, the common mind of Vermont has palpably depreciated within the last thirty years. The Superintendent feels reluctant to avow this as his belief, but he has to say that he is compelled to fear that it is true. It would be too painful to admit in distinct terms that the state had degenerated in its character, that its intelligence had sunk, and that its mind was, perchance, still tending downward. Rather should we be prompted to withhold so unpleasant a truth, by a feeling akin to that of the French financier, who justified himself for having greatly over-estimated the wealth of the nation, by saying that "one could never do too much for his country." But let the inquiry be presented for discerning and thoughtful men to ponder upon, whether they should feel constrained to withhold the answer or not;—Has not the intellect of the state lost something of its former vigor? The generation now coming forward may know as many facts as the generation they are displacing; but do they possess the same strong reasoning powers; the same closeness and accuracy of observation; the same vigorous and manly common-sense?

In regard to hardiness and independence of character, too, is there not visible to the eye of him, who has observed closely and long, a shade of degeneracy? True it is, that independent of systematic educational influence, our situation and circumstances continue to favor, to some extent, the development of these sterling virtues. But is not something more needed to save them from decline? That improved culture, which we desire to secure, is not merely compatible with these virtues, but it would tend at once to preserve them in the fullness of their strength; to bend them to the highest and noblest ends; and to impart to them fresh beauty and brightness.—*State Superintendent's Third Report.*

WILMSEN'S READER, OR CHILDREN'S FRIEND, is a good book for teachers of Summer schools to have at hand. It contains a great deal of information interesting to children, and furnishes means for cultivating good dispositions and habits. If not used as a class-book, the teacher may read from it, and then talk with the children upon what she reads, as a general exercise.

STUDY EACH SCHOLAR, and see what can be made of him. Some who do not succeed well generally, may yet have some peculiar talent that may be made

use of, to awaken the whole mind and soul. Some peculiarity of disposition may exist, of which you must take advantage, in order to govern or excite interest. Let the children, and the parents too, if you can, feel that you are interested in each one, and can sympathize with each one in difficulty and in success.

Teaching.

To teach is to impart instruction or information to others. Those who are to be profited by oral instruction must, of course, be present to the Teacher, not in body merely, but in mind, that is, they must give him their attention; the will must be in a proper frame, they must be willing to listen, willing to learn, willing to be instructed, must believe that they can learn, that they can be instructed, that the Teacher is competent to instruct them; not only this, they must have a desire to learn, not at some future time, but now; a desire to be instructed on the particular subject which is under consideration. But that this state of things may exist, the atmosphere of the room must be healthy and of a proper temperature, the body must be in a comfortable position, the mind must be unoccupied with other subjects and must be in that *impressible* state which can only be produced by arousing to action that desire for knowledge which in the form of curiosity always exists in the youthful mind.

These preliminary remarks will show the propriety of many of the following principles or maxims which are commended to the attention of Teachers.

1. It is useless to communicate information or give instruction to scholars unless you can secure their attention.

2. It is equally useless to attempt to instruct those who are not anxious to learn, and, to learn that which you are attempting to teach.

3. The instruction given must always be nearly on a level with the capacities of those for whom it is intended,—must have reference to their previous attainments and be adapted to their present stage of mental development; hence it would be useless to attempt to explain to young children Kepler's laws or the calculation of eclipses.

4. The amount of information communicated at any time must be proportioned to the capacity of the scholars.

5. The time occupied by any lesson or exercise must vary with their age and advancement; the attention of young children should seldom be confined to an exercise more than eight or ten minutes.

6. The teacher should always endeavor to call out all the knowledge possessed by the class on any subject before presenting any thing new.

7. He should never do any thing for a scholar which the pupil can be led or aided to do for himself.—*Ohio School Journal.*

I, too, acknowledge the all but omnipotence of every culture and nurture; hereby we have either a dwarf bush, or a high-towering well shadowing tree.—*Carlyle.*

Teach One Thing at a Time.

Children who have the habit of listening to words without understanding them, yawn and writhe with manifest symptoms of disgust, whenever they are compelled to hear sounds which convey no ideas to their minds. All supernumerary words should be avoided in cultivating the power of attention.

A few years ago a gentleman brought two Esquimaux to London. He wished to amuse and at the same time astonish them with the magnificence of the metropolis. For this purpose, having equipped them like English gentlemen, he took them out one morning to walk through the streets of London. They walked for several hours in silence; they expressed neither pleasure nor admiration at anything they saw. When their walk was ended, they appeared uncommonly melancholy and stupefied. As soon as they got home, they sat down with their elbows upon their knees, and hid their faces between their hands. The only words they could be brought to utter were:—"Too much smoke—too much noise—too much houses—too much men—too much everything."

Some people who attend public lectures on natural philosophy, with the expectation of being much amused and instructed, go home with feelings similar to those of the poor Esquimaux; they feel that they have had too much of everything. The lecturer has not had time to explain his terms, nor to repeat them till they are distinct in the memory of his audience. With children, every mode of instruction must be hurtful, which fatigues attention. A skillful instructor, therefore, will, as much as possible, avoid the manner of teaching to which the public lecturer is, in some degree, compelled by his situation.—*Miss Edgeworth.*

Common School Convention.

MIDDLETOWN, May 2d, 1849.

The Rutland County Common School Convention met pursuant to notice.

Organized by choosing Rev. D. Hicks, moderator; and L. Smith secretary.

Chose a committee to present topics for discussion, consisting of Dr. Hicks, L. Smith, Rev. J. M. Rockwood, and D. McClure.

Adjourned to 1½ o'clock, P. M.

AFTERNOON SESSION.

Met pursuant to adjournment. Rev. J. M. Rockwood offered prayer.

The business committee reported for discussion, the following topics, viz: the circulation of the School Journal; the formation of a County Educational Association; and the desirableness of a State Delegation to the National Common School Convention.

Heard an address from the County Superintendent; after which proceeded to the discussion of the above topics which were presented in the form of resolutions, and after remarks from different members were adopted.

Resolved, That the Town Superintendents be earnestly requested to act as agents to procure the circulation of the above Journal in their respective towns

—either by personal, or by enlisting the co-operation of teachers in the several districts.

Resolved, That the County Superintendent be respectfully requested to ask of the publishers, a sufficient number of copies to supply each Town Superintendent with a specimen, and to forward the same.

Resolved, That we deem it expedient for the friends of education in the County to organize an association for the improvement of its members, and the promotion of the interests of Common Schools and education in general.

Resolved, That a committee be appointed to prepare a constitution for such an organization, and present the same for consideration and action, at a meeting of the friends of education, which they shall call for that purpose.

The following persons were appointed that committee.

Rev. Dr. Hicks, Rev. Mr. Newman, Rev. Mr. Higley, Rev. L. Smith, and Rev. A. Walker.

Resolved, That we recommend to the different counties, to take measures to send delegates to the State meeting, on the 4th of July, for the purpose of choosing delegates to the National Common School Convention, to be holden in the city of Philadelphia, on the 23d of August next.

Voted, that the doings of this Convention be published in the Rutland Herald, Union Whig, and School Journal.

Voted, that Dr. Hicks be requested to furnish his address for publication in the county papers and School Journal; and that the Secretary be a committee to solicit its insertion as above.

Voted to adjourn sine die.

JOHN A. HICKS, Moderator.

National Convention of the Friends of Common Schools.

The undersigned, deeming that the great cause of Popular Education in the United States may be advanced, and the exertions of its friends strengthened and systematized, by mutual consultation and deliberation, respectfully request the friends of Common Schools, and of Universal Education, throughout the Union, to meet in Convention at the city of Philadelphia, on Wednesday, the 23d day of August next, at 10 o'clock, A. M., for the promotion of this paramount interest of our Republican Institutions."

We have only room for the following influential names, from among the large number of warm friends of Popular Education, who have signified their acquiescence in this call.

Rt. Rev. Alonzo Potter, D. D., Philadelphia.

George M. Wharton, Esq., President of Board of Controllers of Public Schools, Co. of Philadelphia.

Hon. Joseph R. Chandler, Pres't of Board of Directors of Girard College, Philadelphia.

John S. Hart, A. M., Pres't Central High School Philadelphia.

Alfred E. Wright, Editor of "Wright's Casket and "Paper," Philadelphia.

Townsend Haines, State Sup. of Public Schools of Pennsylvania.

Christopher Morgan, Staté Sup. of Public Schools of New York.

Dr. T. F. King, State Sup. of Public Schools of New Jersey.

Hon. Henry Barnard, Com. of Public Schools of Rhode Island.

Seth P. Beers, State Sup't of Public Schools of Connecticut.

William G. Crosby, Sec. of Board of Education, Maine.

Richard S. Rust, Com. of Public Schools, N. H.

Hon. Ira Mayhew, Sup't of Public Instruction, State of Michigan.

Samuel Galloway, State Sup't of Public Schools, Ohio.

Robert J. Breckenridge, D. D., Sup. of Public Schools, Kentucky.

Hon. Horace Mann, for 12 years Sec. of Board of Education, Mass.

S. S. Randall, Esq., for 11 years Dep. Sup. of Public Schools, State of New York.

Ex-Governor Horace Eaton, State Sup't of Public Schools of Vermont.

H. S. Cooley, Esq., State Sup't of Common Schools, Ill.

Thos. H. Benton, jr., State Sup't of Pub. Schools Iowa.

Hon. Salem Town, N. Y.

Judge Willard Hall, Delaware.

M. D. Leggett, Esq., Editor of School Clarion, Ohio.

Asa D. Lord, Esq., Editor of Ohio School Journal.

D. L. Swain, A. M., Pres't of the University of North Carolina.

Prof. J. H. Ingraham, Nashville, Tenn.

Judge E. Lane, Sandusky, Ohio.

A. Church, D. D., Pres't of University, Athens, Georgia.

Prof. M. L. Stoeber, Penn'a College, Gettysburg

H. B. Underhill, Principal Natchez Institute, Miss.

James L. Enos, Editor of North Western Educator, Chicago, Ill.

Edward Cooper, Esq., Editor of District School Journal, Albany, N. Y.

Philip Lindsey, D. D., Pres't of University of Nashville.

A. D. Bache, LL. D. Sup't of U. S. Coast Survey, Washington.

H. W. Heath, LL. D. Maryland College of Teachers.

Joshiah Hurty, Esq., Sparta, Ohio.

Rev. R. Morris, Jackson Miss.,

State Common School Conventions.

The Committee of Arrangements for the National Common School Convention, which is to assemble in Philadelphia on the 22nd of August next, beg leave, respectfully and earnestly, to recommend to the friends of Common School Education in the several states of the Union, to assemble in State Convention at their respective capitals, or at some central location, on or before the fourth day of July next, for the purpose of

appointing delegates to the National Convention, and transacting such other business in reference to the interests of Common School Education within their borders, as may be deemed expedient. It is desirable that the number of delegates from each state, be, at least, equal to its representation in Congress, and that a full delegation, should, as far as may be practicable, be secured. State or Local Conventions of Teachers, Superintendents, or other assemblages of the friends of education, are also respectfully requested to appoint delegates to the proposed National Convention.

IF Editors and publishers of newspapers throughout the Union, are earnestly requested to publish this notice, together with the notice recommending the National Common School Convention.

By order of the Committee,
JOSEPH R. CHANDLER, *Chairman*.
A. E. WRIGHT, *Cor. Sec.*

To the Teacher.

Forward, forward, forward each!
Labor freely; rightly teach
Little mortals, little worth,
Future sovereigns of the earth,—
Happy angels by and by—
How to live, and how to die;
Forward, forward, do n't despair,
God and angels witness are.

Onward, onward, never pause!
Ask not for the world's applause,
Seek not ignorant abuse.
Labor, labor, labor on,
Emulate the faithful sun;
Warm, and fructify, and light
Mind that sleeps in solemn night.

Forward, forward, forward all!
Let no obstacle appall.
Human mind is thine to teach,
Human heart is thine to reach;
Future men that time shall see,
Worthy teacher, rests with thee.
Do thy duty—do it well.
Thy reward no tongue can tell.

BEAT THIS IF YOU CAN. We saw by the Register of the Medford High School, the other day, that, during a term of four months, with 90 scholars, there were but 61 tardinesses in all!—and there were more than 60 scholars not tardy once during that long winter, snow-drifting, term. What will astonish some of the slack ones most, is the fact, that no scholar in that school is required by the teacher to bring an excuse for being tardy. The common practice is not in operation,—the common rule not in force. This state of things was not brought about by the use of that rule. The teacher went to work with those scholars, and convinced them of the evils of being tardy, and made it *disreputable* for a scholar to be behind time. That is the feeling now. No scholar can come in late without a blush on his cheek, and his footfalls ringing in his ears so that he hardly knows the way to his seat. "Shame and confusion of face" once felt by scholars for being tardy in any school, and there is no need of asking for excuses from parents. It is easy to teach school, and pleasant to attend school

under such circumstances. It is an honor to the State to have such. Let there be hundreds of them—yes, thousands.—*Scholar's Penny Gazette.*

Education of Children.

What a noble sentiment is that of John Adams, which he conveyed to his wife, when public duties for a time separated him and his family!—"The education of our children is never out of my mind. Train them in virtue; habituate them to industry, activity, and spirit. Make them consider every vice as shameful and unmanly. Fire them with ambition to be useful. Make them disdain to be destitute of any useful knowledge."

What a valuable lesson is this, coming, as it does, from a man who had reached the highest summit of human greatness! Every parent should treasure it up, and keep it constantly in mind.

If all of us who are parents would make this sentiment true, so far as we are concerned, what a lovely face would society present! "*The education of my children is never out of my mind.*"

THE DIFFERENCE between two neighboring schools is often as great as between two acres of corn, one of which will yield 20 and the other 80 bushels. In the acres of corn, perhaps but a single family may be interested, and but for a single year, and to the extent of a few dollars. In the schools, whole districts are interested; and the results are not limited by any amount of cash or any term of time. Parent! Teacher!—shall your school be among those which cost more than they are worth! Shall the school houses, the wages, the precious time of the children which they can never enjoy again, be, this season, a bad investment!

WRITING. A friend called on me the other day, learning that I had some autographs, and proposing an exchange of duplicates, and in the exchange he presented to me George Washington's autograph, received from his biographer, Jared Sparks, which was written eighty-one years ago,—eight years before the Declaration of Independence. Every letter is written perfectly plain, so that a child might almost read it. I see before me now the hand-writing of Andrew Jackson, Martin Van Buren, and John Tyler, three of the Ex-Presidents of the United States; of Richard M. Johnson, Vice President; of Edward Livingston, Louis McLane, and Daniel Webster, Secretaries of State; of Levi Woodbury, and John C. Spencer, members of the Cabinet of Presidents Jackson and Tyler, and must confess that the autograph of each is a model for our young men.—*Common School Advocate.*

EDUCATION IN INDIANA. The people of this State have voted, by a majority of nearly fifteen thousand, in favor of levying a tax for the support of free schools throughout the State. On the 16th ult., a convention was held at Indianapolis for the purpose of devising means for carrying into effect the provisions of the constitution for a system of general edu-

cation, commencing with town schools, and ascending in regular gradation to a State University.

Drawing in New York Schools.

Each Spring and Autumn the Public Schools in this city have an exhibition of specimens of drawing, mapping, and writing. Pupils from each of the schools assemble at one place, bringing with them their drawings, &c.

These are placed about the room, on desks, and against the walls, that visitors and the pupils of the different schools may pass around and examine them.

A few days since we had the pleasure of attending one of these exhibitions, and were much pleased with the display of beautiful specimens of mapping, drawing, and writing. Many of the specimens of penmanship would have done great credit to much older pupils. Beside the specimens from the public schools of New York, one table was covered with drawings and maps from other schools in other places.

On this table were drawings from schools in Washington, D. C., Virginia, Iowa, and from schools in the counties of Westchester, Albany, and Wyoming, in the State of New York. Also specimens of penmanship from a school in the city of Buffalo, N. Y.—*Student.*

Domestic Training.

Permit us to say to those mothers who interest themselves in the education of their children, be early assiduous to implant domestic tastes in the minds of your daughters. Let your little girl sit by your side with her needle. Do not put her from you when you discharge these employments which are for the comfort of the family. Let her take part in them as far as her feeble hand is capable. Teach her that this will be her province when she becomes a woman. Inspire her with the desire to make all around her comfortable and happy. Instruct her in the rudiments of that science whose results are beautiful. Teach her that not selfish gratification, but the good of the household, the improvement of even the humblest dependant, is the business of her sex. When she questions you, repay her curiosity with clear and loving explanations. When you walk out to call on your friends, sometimes take her with you. Especially if you visit the aged, or go on errands of mercy to the sick and poor, let her be your companion. Allow her to sit by the side of the sufferer, and learn those nursing services which afford relief to him. Associate her with you. Make her your friend. Purify and perfect your own example for her sake. And while you mingle with domestic training, and with the germ of benevolence, a knowledge of the world of books, to which it will be a sweet privilege to introduce her, should you be able to add not a single fashionable accomplishment, still be continually thankful in shielding her from the contagion of evil example.—*Axon.*

Disobedient children, if preserved from the gallows, are reserved for the rack, to be tortured by their own posterity. One complaining that never a

father had so undutiful a child as he had. "Yes," said his son, "with less grace than truth, "my grandfather had."—*Fuller*.

Singing School Scene.

The Musical Gazette gives an account of an exhibition by Mr. Johnson's Juvenile Choir in Boston, from which we copy the following :

"Immediately after the last named song, a parcel of boys and girls with satchels on their backs hurried over the platform, singing,

O merrily on, O merrily on, &c.

While at the same time an immense body of children suddenly made their appearance in the side galleries, all of whom were tastefully dressed, most having chaplets of flowers on their heads, and having floral decorations in their hands. Soon all were quietly seated, and after a few moments of silence, a boy of fourteen walked on to the platform, seated himself at the before mentioned school-master's table, assumed the rod of office, and summoned out the spelling class in the following song :

Come all ye young masters and misses,
With faces all smiling and fair,
Obey now your parents' kind wishes,
Repaying their counsel and care.
For I am the one to teach you,
The myst'ries of A and of B,
And knowledge, with all her bright treasures,
Delighted you'll presently see.

During this song a class of little mites of boys and girls came upon the platform, to whom he issued in musical language the command,

Now repeat the alphabet, A, B, C.

To this request the scholars responded,

A, B, C, D, E, F, G,
H, I, J, K, L M N O P, &c.

Summing up their acquirements with,

Now we've said the alphabet, and bright scholars we,
Masters of the mysteries of A, B, C.

After this the whole class performed wonders in the spelling line, orthographing the different words, man, boy, cat, &c., with great precision, doing the whole, of course, in song. So great was their proficiency that it drew forth from the master,—

Very well, very well, you've spelt very well,
Fold your arms and quiet be, and list to the bell.

The class in spelling were now dismissed, and the whole school were thus addressed by the master :

Draw forth now your pencil and slate,

Who in this world would thrive

Must learn to calculate;

Now close attention give :—

We'll suppose that a lady lives 70 years;

One-tenth she spends in sorrow and tears,

One-third gives she to healthful sleep,

And one-seventh does as holy time keep,

One-sixth gives to recreation,

And the same to conversation ;—

How many years will the lady sleep ?

How many months will she wake and weep ?

How many weeks will she laugh or talk ?

How many days will she play or walk ?

How many Sabbaths best receive—

And how many minutes will she live ?

During this song the children each produced a small slate, and after the master's song was finished, begun to do the sum, keeping time with the organ, which by the way never ceased its music. The sound of 500 slate pencils, going *click, click, click ; click, click, click*, formed a funny accompaniment to the organ. After having ciphered a reasonable time, the scholars thus announced the result :

23 years will the lady slumber,
64 weary months must number,
Weeks 600 is she speaking,
3600 Sabbath mornings
Rise with all their hopes and warnings ;
Of the moments swift and fleeting,
Through her earthly pathway meeting,
Given to all—a precious treasure—
Full five million is the measure."

Fourth of July.

Children should speak in time for a Fourth of July celebration. Ask your parents and teachers. Just read what they are already doing about it at Middlebury :—

"A Floral Festival, as it is called, [says the *Galaxy*] is in contemplation by the members of Mr. E. W. Nichols' Juvenile Choir, for the Fourth of July, which will be a novelty at this place, and if the young folks are suitably provided with Flora's garlands, may decorate with its choicest honors the day of the Declaration. Prof. Eaton is expected to preside, and while a new interest, by the arrangement, will be added to the proper studies of the choir for the season, we hope their young contemporaries, in this vicinity, will not be unmindful of the occasion, and that arrangements will be made, so that all who are provided with the beautiful symbols of festivity may be joined in the procession and the proper coronations of the day. A Young Ladies' committee will have the matter in charge."

ERRORS ABOUT TIME. Strange as the statement may appear, I have myself actually met with teachers so entirely heretical as to a belief in clocks and watches, as not to know at what time this or that service ought to commence. Such expressions as "a little after nine," "about three," "six, or half past," have been elicited in reply to inquiries on the subject; and I once encountered a teacher on the lookout for some one to address a meeting, the sum and substance of whose knowledge was thus verified by a waggish friend :

He wanted a person—he didn't know who,
Who lived near another—he didn't know, too;
To ask him to go—he didn't know where,
To speak to some people—who wouldn't be there;
And when asked the time, said he thought it might be
A little before—or, perhaps, after—three.

If a man's wit be wandering, let him study the mathematics—*Bacon*.

A beautiful oriental proverb runs thus: "With time and patience the mulberry-leaf becomes satin."

Vacant souls are a burden to themselves, and therefore engaged in a continual round of dissipation.

The "SCHOLAR'S LEAF," published at Portland, has some pages in each number devoted to communications from scholars. The last number has ten short papers from scholars in different schools,—some in prose and some in verse. Sometimes scholars propose questions, and sometimes answer them. A few communications of this sort have been sent to us; but we want many more. Parents, and teachers of common schools or academies, might, we think, do good by encouraging young writers to try their power in this way. To say nothing of its other advantages, writing for the press is the best possible discipline in spelling and punctuation. We have, at least, a page or so each month that we shall be glad to have occupied by scholars.

The Right for its own sake.

"James, you must not go over that fence," said Mrs. Mason to her son, who was with her on a visit to her sister, Mrs. Ward; "it is not right that you should do so."

"I know it, mother; I am only going to look over," said James.

"You had better get down," said Mrs. Mason. James did so at once.

The fence in question separated the yard in which James was playing from a peach orchard, which the owner had forbidden any one to enter. The trees were loaded with fine ripe peaches, and James thought he would climb to the top of the fence and look at them. He had no thought whatever of taking any of them. He knew it would not be right. Still he was right in promptly obeying the advice of his mother. It caused him to avoid temptation. We are not only to resist temptation, but to avoid it whenever duty will permit.

"I observe, sister," said Mrs. Ward, "that you never say any thing to your son about the consequences of disobedience."

"I have taught him the fact, that sin will be punished; but I have avoided making mention of the penalty every time that I give a command. I do not think it wise to be dwelling constantly upon the penalty of disobedience. I think it interferes with the development of the true principle of obedience. It makes the impression upon the mind of the child that obedience is to be rendered solely to avoid the penalty of disobedience. That impression I deem to be a very unhappy one."

"Suppose you tell him he must not do a thing, and he asks you the reason why he must not?"

"I should judge from the circumstances of the case, whether it was best to give him a reason or not. I have labored to teach him that the fact that a thing is wrong, is a sufficient reason why he should not do it. I have always gone upon the assumption that I could give no higher reason why he should do a thing, than the fact that it is right. I believe we are to teach our children that they are under obligation to do right and avoid doing wrong, irrespective of the reward in the one case, and the penalty in the other."

"That may be with some children, but not with all.

There are some who will not obey unless you hold up the penalty of disobedience before them."

That is true; but it remains to be considered whether the case would not have been different, had care been taken to develop rightly their nature. It is rightly developed by exercise—by appealing to it. If we always act towards a child on the principle that *RIGHT* is the supreme law, that it is a self-evident truth, that we are under obligation to do right for its own sake, that child will never think of requiring a reason for doing right. I believe our moral nature is so constituted, that it will recognize the obligation, though, from various causes, that obligation may not be met."—*Mother's Journal*.

PRESSURE OF THE SEA. If a piece of wood which floats on the water be forced down to a great depth in the sea, the pressure of the surrounding liquid will force it into the pores of the wood, and so increase its weight that it will no longer be capable of floating or rising to the surface. Hence the timber of ships which have foundered in the deep part of the ocean, never rises again to the surface, like those which have sunk near to the shore. A diver may with impunity plunge to a certain depth of the sea; but there is a limit beyond which he cannot live under the pressure to which he is subject. For the same reason, it is probable that there is a depth beyond which fishes cannot live. They, according to Joslin, have been caught in a depth at which they must have sustained a pressure of eighty tons to each square foot of the surface of their bodies.

I hate to see a thing done by halves; if it be right, do it boldly; if it be wrong, leave it undone.

Questions.

A shopkeeper, who was a bad bookkeeper, knows neither the weight nor the first cost of a certain article which he has purchased. He only recollects, that if he had sold the whole at \$1 50 per lb. he would have gained \$5 by it; and if he sold it at \$1 10 per lb. he would have lost \$15 by it. What was the weight and first cost of the article?

A traveller inquiring the distance from one place to another is told that it will take the same time to pass over it, whether he goes 25 miles the first day, 28 the second, 31 the third, and so on in arithmetical progression; or, 1 mile the first day, 4 the second, 9 the third, 16 the fourth, etc. What is the distance?

There is a stick of timber 20 feet long, running a regular taper to a point. How far from the large end must two men put a lever, to carry two-thirds of it, while one man carries the small end? and how far from the small end must it be placed to do the same, while one man carries the large end?

Why will a fine cambric needle float upon the surface of water?

Transpose the letters in *New Door*, so as to make one word.

THE AGRICULTURIST.

Vermont Butter.

The value of the annual products of the dairy in Vermont is estimated to be about \$5,000,000. An increase of 10 per cent. on this amount would be an item worth securing; still more an increase of 20 or 25 per cent. But it is well known that the products of some of our dairies command in market more than 25 per cent. above the average, and that those are the dairies by which the owners get rich.

It must be confessed that far the greater part of the butter made in Vermont is decidedly poor. Our own citizens remark that they are apt to find better butter on the table in Boston and New York than here.—But this cannot be attributed to any fault of our climate, our pastures, or our stock. When premiums for butter and cheese, open to all New England, were offered in Boston, the best and the most of them were taken by Vermonters. We lose the advantage of furnishing the best article simply for want of care and skill.

Butter-making is a matter to be studied. The dairy-woman, if not already able to command the highest price, must read, think, observe, until she can. It is a duty that she owes to her family. It is one of the easiest ways by which she can increase the family thrift.

The making of butter is a kind of work that is easily understood. It demands exactness and care; attention to a few particulars, not difficult to learn and easily remembered. By a little neglect, a little departure from the right course, butter that might have been worth 25 cents is so injured as not to command 16. Think, good woman, of wasting 9 cents a pound on a churning of butter! Think of doing it so often, that when your husband carries your butter to market he cannot get so much for it by 6 or 8 cents a pound as he might have got for the very best!

Perhaps, however, we ought first to say a word to the husbands. It is in vain to expect a woman to make perfect butter without a good place to do the work in. She must have a milk room that can be kept cool, and at a uniform temperature. Generally, in the best New York and Pennsylvania dairies, the room appropriated for this purpose is built over a spring or stream of running water, and if possible well shaded. When this can be done near the house, there is no better way. The end may be secured, however, in the house, and especially by a well prepared cellar. The points to be secured are, coolness, ventilation, and freedom from every thing that can impart flavor to the cream. For these purposes the cellar should be, if possible, at the N. E. corner of the house; it should have windows on the north and east; and should be used for no other purpose. To make it perfect, when building your house, you should make a flue, connecting with the milk cellar and passing up in the chimney stack. The flue should be 12 inches in diameter, and should by no means enter the smoke flue, but run up to the top of the chimney. With such a flue, the east window

may be dispensed with. The floor should be flagged with stones, both for the sake of coolness, and because they do not absorb a pail of milk, &c. Plenty of pans should be provided; cows that give rich milk; a good pasture; the best of salt; and whatever books or other sources of information a dairy-woman needs. With these, you ought to have good butter; without making such provisions, for substance, if you do have a *first rate* article, the maker will deserve more credit than you will be likely to give her.

The butter-maker's first duty is indicated by the description of the milk room. It is to keep every thing most scrupulously clean—room, pails, pans, atmosphere. In regard to many other points, there are different opinions; and good butter is made either by churning sweet milk, or milk beginning to sour, with the cream, or the cream alone, while sweet, or whea a little acid. It is made excellent, too, when washed, or when the butter milk is all worked out without the use of water. It is only essential that you get the pure butter, and nothing but the butter. It is made excellent, too, when nothing but salt is used to season it, and when a little loaf sugar, or a very little saltpetre, or a mixture of saltpetre and sugar, is added. These points we shall not discuss at present.

The practice of churning the milk is not common in Vermont. Much of the best butter in the world, however, is made in that way. Possibly the means of doing it conveniently and at the same time avoiding sundry other troubles and liabilities, may be at hand. We find a churn advertised which promises the following advantages:—

"1st. It produces butter in less time than any other churn, making it and gathering it from sweet milk in from three to eight minutes, and from cream in much less time.

2d. It produces more butter from the same amount of milk or cream, than the ordinary method, as it does its work in a more thorough and scientific manner.

3d. It is the cheapest and most convenient Churn ever invented, involving the philosophical principles of better making.

4th. New milk, after being churned, is sweet and suitable for family use.

5th. Instead of feeding the calf with milk direct from the cow, churned sweet milk will answer every purpose. By this process, the butter is all profit."

And the agents promise to refund the money if the churn does not perform as recommended. It was patented in January last. It has been tried in the presence of gentlemen known to the public, who certify to the fact of its producing butter from sweet milk in less than five minutes. Mr. J. S. Skinner, for instance, late editor of the Agricultural Library, furnishes a statement of his having witnessed it, with many other gentlemen, at a late agricultural dinner. A churning is now made every day at 12 o'clock, at the agency in Boston. A churn capable of churning seven quartcasks \$3; one for twenty gallons, \$12; and intermediate sizes are always on hand. The article is called "*Anthony & Emerson's Double Acting Rotary Churn.*" For county rights in Vermont, address Jones & Curtis, 54 Broad street, Boston.

The following statement is from a good authority, the *New York Farmer and Mechanic*.

ANATHONY & EMERSON'S ROTARY CHURN. This valuable improvement, which we have noticed in the *Farmer and Mechanic* of last week, seems destined to come into general use. Indeed, we can scarcely conceive a more simple and efficient machine for producing butter from cream, or new milk even, than this churn. Constructed strictly on scientific principles, it combines economy with great utility in its application, producing butter both from cream and milk in less than five minutes, requiring only the labor of a small lad in its operation. This we can attest from experience, having used one in our family to our entire satisfaction. So perfect is the operation, that more butter, and a better quality, is obtained from the same quantity of cream than by any other method we have ever tried.

"FACTS IN CHEMISTRY." It is several months since a correspondent whose communications are always received with pleasure, sent us an article under the above title, concluding with a promise of something more of the same kind. Probably the writer is not reminded of the hope he encouraged so often as we are by seeing the article referred to, in other papers.

FLOWERS. Does the reader know of how much improvement the common Pansey (*viola tricolor*) is susceptible! Let him send to Messrs. Hovey & Co., or Mr. Breck, for choice seed, and the product will be a treasure. We have just cut a flower, (the plant derived through several generations from such seed,) which measures one and three-fourths by one and seven-eighths inches in diameter. Of course a single petal is larger than a whole flower of the common kind; and the shape is incomparably finer.

A like improvement has been made in the Carnation Pink. The shows at Boston, where these flowers in their season are so conspicuous and rich, have nothing better than the same seed would produce any where in Vermont with a little care. Seedling Pansies bloom the same season; Carnation Pinks not till the second year. When the young carnation plants have attained growth enough to show the difference, throw away such as have the broadest leaves, as they would produce single and worthless flowers. Among Pansies, on the contrary, those which have the largest leaves are best.

BREAD. We published an excellent article on bread-making by "setting a sponge," as it is called, in our last volume (page 158). In our present number we have a good one on the use of an acid and alkali instead of yeast, &c. Our object is, not so much to recommend one method rather than another, as to secure attention to the subject of bread-making, and to furnish instructions by which it may be made good in either way. The hard-working people of Vermont deserve to have good bread; and when we consider the use of that article by man, woman and child, every day in the year, and three times a day, or more, and remember, too, how much health and vigor (to

say nothing of economy and enjoyment) depend on having it good, and also how much that is absolutely bad is eaten among us,—we shall not be regarded as going out of our way, if we do call attention to it often, and sometimes in a long article.

Agricultural Premiums.

Our Agricultural Societies may profit by the experience of older ones. The *Highland Society* of Scotland has been one of the most successful in the world, and embraces some of the best cultivators living. The character of their *Premium Lists* may be seen by the following items from that just published for 1849 and subsequent years:—

"Deep Tillage. For approved report thereon—gold medal, or ten sovereigns.

Liquid Manures. Do. do.

Manures. Fifty sovereigns; the report to be lodged by 1st Nov., 1849.

Trifolium Hybridum, or Alsiche Clover. Report on—gold medal, or ten sovereigns.

Clovers and Grasses for two or three years' Pasture. Gold medal, or ten sovereigns; report to be lodged by 1st Nov., 1850.

Comparative Productiveness, &c., of Different Varieties of the Cereal Grains. The gold medal, or five sovereigns; by 1st Nov., 1849.

Improved Varieties of Agricultural Plants. Gold medal, or ten sovereigns; by 1st Nov., 1849.

Flax. Twenty sovereigns; report by 1st of Nov. 1849.

Comparative Value of Different Plants as Food. Several premiums of gold medal and five sovereigns.

Vegetable Productions of India, China, America, &c. For approved report on the hardy and useful herbaceous plants, including graius and grasses of China, the Islands of the Eastern Archipelago; the Himalaya country; the Falkland Islands, and South Sea Islands; California; the high North Western Districts of America—gold medal, or ten sovereigns; by 1st Nov., 1849.

Tussac Grass. The gold medal; by 1st November, 1849.

Feding of Stock. Twenty sovereigns; by 1st of Nov., 1849."

FRUIT. It will be seen by a notice in this paper that an opportunity will occur next autumn for examining and comparing the valuable native apples to be found in Vermont. We hope all who have kinds that they value, will take care to forward (or, what would be better, to carry) specimens. Any member of the committee would receive thankfully any information in regard to fruit's, of any kind, growing in the State.

The premiums offered by the N. Y. State Agricultural Society this year, amount to about \$6,000

An exchange paper says—when the cucumber is taken from the vine, let it be cut off with a knife, leaving about the eighth of an inch of the cucumber remaining to the stem upon which it grew, then slit the stem with a knife, from its end to the vine, leaving a

particle of the cucumber to each division, and for as many slits or divisions as are made in it there will be new cucumbers, as large and as fine as those that grow in the natural way.

Vermont Fruit Growers' Convention.

The State Committee of the North American Pomological Convention, at the request of many Fruit Growers and others of the State, have decided on calling a convention to be held at Montpelier, on Thursday, the 18th day of October next. Gentlemen interested in growing fruit in Vermont and delegates from Societies are invited to attend.

Specimens of fruit from all parts of the State are particularly desired. If sent by any one not personally attending, they should be accompanied by a statement, giving the name of the fruit and of the grower; the origin if known; the habits and growth of the tree; its adaptation to particular soils, &c. &c. Any member of the committee will be happy to take charge of specimens from his vicinity.

Communications and fruit may also be sent to the care of Daniel Baldwin, Esq., of Montpelier, who will take charge of and present them to the convention.

C. GOODRICH, Burlington,	} Committee.
A. CHAPMAN, Middlebury,	
E. C. TRACY, Windsor,	
Rev. L. G. BINGHAM, Williston,	
V. ATWOOD, St. Albans,	
T. H. PECK, Burlington,	
J. D. BRADLEY, Brattleboro.	

Editors in Vermont interested in the object, will confer a favor on the Committee and their readers by inserting the foregoing in their respective papers.

LADIES' SWEETING APPLE. Some time since we had occasion to notice this fine apple, and to speak of it, as grown in New York, in terms of high praise. We did not then know that it had been fruited in this vicinity, and could not, therefore, so confidently recommend it for cultivation; but we have since ascertained that it is cultivated in North Brookfield, where it sustains the same high character as in New York, as being the very best and most productive of all sweet winter apples. We have just been eating one from North Brookfield, and we have never before seen a sweet apple, at this season of the year, that would compare with it for excellence. Its flesh is very tender and juicy, of a honeyed sweetness, and with high and fine perfume. It is moreover an apple of great beauty, being mostly of a brilliant red on a bright yellow ground. We are assured that it is exceedingly productive, and profitable for culture. It certainly must be a capital market fruit.—*Mass. Spy.*

Mr. Downing calls this the best of all winter sweet apples. We do not know that it has been fruited in Vermont. It is growing here, and probably in most of the nurseries in the State.

WIRE FENCES. D. Kingman gives, in the Genesee Farmer, a statement of the expense of 104 rods of wire fence, amounting to \$55.77, or 53½ cents per rod. This is for wire and red cedar posts. The cost

of labor is not put down. The fence had been tested, and found sufficient against the attempts of cattle and hogs.

PLANK ROADS. Plank Roads are about to be introduced into Vermont. Our soil generally is so hard and so easily made into a good road bed, and there is so much up and down hill, that the advantages of these roads over others cannot be so great in Vermont as in loose soils and a more level country. Yet they may doubtless be constructed in many places with great advantage. They are the farmers' railroads. The *Detroit Commercial Bulletin* furnishes the following statement:—

"Suppose a farmer living some ten miles out of Detroit has 140 bushels of wheat to take to market, in his wagon, over common roads in the condition in which they generally are. He would not ordinarily carry more than 35 bushels at a load—the weight of which at 60 lbs. the bushel is 2,100 lbs.; one would occupy so much time that he could only make one trip a day, and then he would have to make four trips and consume four days in conveying his 140 bushels to market—but if he could travel on a plank road he could carry the whole 140 bushels at one load; the weight of the whole at 60 lbs. the bushel is 4 tons and 400 lbs. How then does the account stand?—Four trips over a common road will cost as follows: 4 days for himself and team at \$1.50 a day, \$6.00

One trip over a plank road, in one day is \$1.50.

Toll both ways at 2 cents per mile, is \$1.90.

Difference in favor of plank road is \$4.10."

SWEETENING BUTTER. A writer in the *Mechanics' Magazine* states, as the result of careful experiments, that butter, lard, &c., that has acquired a disagreeable flavor, may be rendered sweet by carbonate of soda,—two and a half drachms to three pounds of butter.

GREAT PROFITS. Genesee Farmer for January has a letter from Richard T. Hand, of Mendon, N. Y., giving the product of twenty-three apple trees, standing on one acre of land, as follows:

100 Bbls.	Roxbury Russett	at \$1.00,	\$100.00
110 "	Northern Spy,	2.50,	275.00
10 "	do do	3.50,	35.00
30 "	do do 2d qu'ty.	1.00,	30.00
440.00			

The Northern Spy apples were mostly sold to J. H. Watts of Rochester, for the eastern market. We presume he will make a handsome profit on them. Such an income from a single acre is most extraordinary, and shows the advantage of good culture, and a good selection of the varieties in the production of fruit for the market.

"EGGS THAT ARE EGGS." Mr. Z. B. Robbins, of Cornwall, left in our office, the other day, several eggs, measuring 6½ inches in circumference, and weighing 3 oz. each, which were laid by English Hens in his possession.—*Middlebury paper.*

Rearing Lambs for Market.

At our request, Mr. George Edwards, of Mechanicville, Saratoga county, has furnished us the following account of his mode of managing sheep and rearing lambs for market:

"As my farm is near our large markets, and well adapted to what I call *mixed husbandry*—that is sheep, grain, and grass—the soil of a loam, high and dry—I find the rearing of fat lambs the most profitable branch of farming. The ewes have generally been bought in September—always selecting those of rather coarse wool, they being larger, and generally the best nurses. The rams (pure South Downs) are put to them early in November, and the lambs are dropped about the first of April. The ewes are fed during the winter with corn-stalks and straw, and about one month before lambing and from thence till they go to pasture, they are each fed with three quarts of brewer's grains per day.

"Last year, 100 ewes raised 100 lambs. The wool, which was sold at Troy at 32 cents per lb., brought \$104.75. Twenty-five lambs sold at \$2 each, one ram lamb \$5, one do. \$3, and the remaining seventy-three at \$1.75 each. They were all taken away by the last of July. The ewes were sold to the butcher at \$2 each in October—so that the hundred ewes realized \$490.50.

"It is desirable to get rid of the lambs early, that the ewes may have time to fatten, so that they may be sold to the butcher in the fall—giving room for a new flock which should be bought in for the next season.

"It is a good mode, and one which we have frequently adopted, if we have a piece of rye which had been sown on a clover sod, (or where the land was otherwise in good order) to plow the stubble the very moment the rye is off the field, and sow turnips. The furrows are first harrowed with a light harrow, lengthwise, and then crosswise—the seed sown broadcast, 2 lbs. per acre—ending with rolling the ground with a very light roller. The turnip called the stubble turnip, is preferred. A larger quantity of seed is sown than some use, in order to get a good stand in spite of the ravages of the fly. I have now procured one of Emery's seed-planters, and shall probably sow the turnips in drills henceforth—the rows two feet apart, to give space to work between them with a horse and small plow, or cultivator. As soon as the turnips are up about two inches, we put on the light harrows, passing both ways, keeping a straight course. If the turnips are in drills, the drags are only run across the rows. About two days after the harrows are run over the turnips, they are gone over with hoes, and thinned where they are in bunches.

"Ten acres of turnips, with a tolerable even plant, will supply and fatten 150 sheep, and will afford fine keep for them from the first of October to the end of November, (if there is not much snow) at a time when pasture is generally short. About one acre should be fenced off to commence with, and after four or five days, add about one-fourth of an acre every other day. At first the sheep will appear not to like the turnips, but after three or four days they will eat

them rapidly. A boy should be placed with the sheep for two or three hours each day, to chop up the shells—the sheep will fall back and eat them up clean.

"While the sheep are on the turnips, it is an advantage to give them a little cut hay in troughs—say about three bushels per day for 150 sheep.

"Let any man try this plan, and if his land is in good heart, he will not only find his sheep get *really fat*, but they will leave the land in a fine condition for a spring crop. It must be observed, the more attention that is paid to keeping down the weeds, the better will the crop pay cost."—*Cultivator*.

Cultivation of Carrots.

In front of the new house we noticed a remarkable field of carrots, of one acre. The cultivation of the ground had been preparatory to laying it down as a level and permanent grass-plot. Twenty loads of compost were spread upon the sward last spring, and turned under to the depth of six inches, and the subsoil plow, following in the furrow, loosened the earth ten inches deeper. Twenty loads of compost were then spread on top of the sod furrows, which, harrowed until two or three inches in depth, became perfectly mellow and fine; and early in June the seed was sown with a machine, in rows two feet apart. At the time of our visit, the carrots had made most vigorous growth, the tops so completely covering the ground that the eye could not distinguish the rows. Knowing well the fact that this crop makes its principal growth of root after the 20th of September, we will not state the probable amount of bushels to be harvested from this field, as it might sound like a large story. Suffice it to say, that any reasonable man should be satisfied with the like of it. The decomposing sod underneath was in time for the carrots, and together with the manure turned under with it, perfectly sustained the crop, in the latter part of its growth, and also kept the land light and mellow, permitting the roots to penetrate and range about at pleasure. The loosened subsoil invited them still farther below. Making a good part of its growth above ground, it is the more readily harvested without disturbing the sod; and as Mr. Phinney intended the field for a lawn, he was anxious to preserve the surface level and smooth for receiving the grass-seed.

In our ignorance, we had always supposed, until last season, that old land, as it is called, was the only suitable preparation for growing the carrot. We are now well convinced of our mistake. A neighbor last spring sowed a piece of green-sward land to carrots, on the same day that we sowed a piece of rich, fertile old land. The seed for both fields was out of the same lot, and the land thoroughly prepared in both cases. We frequently compared notes during the progress of our crops, in order to test the merits of a green-sward ley for the carrot; and the result was that our neighbor's crop yielded nearly a third more than ours, while his expense in hoeing and weeding was one-half less.

It seems surprising that the carrot is not more universally raised by our farmers. It is a clean, pretty

root to handle ; as winter feed, nothing is more grateful to the taste, or promotive of the growth and thrift of cattle and horses ; for milch cows, it exceeds any other *mess-feed* for producing *meat yellow butter* ; and if the ground is properly chosen and prepared, it makes a very profitable return for the labor bestowed. —*F. Holbrook, Cultivator.*

Mr. Phinney's Orchards.

Mr. F. Holbrook of Brattleboro', gives in the Cultivator the following account of a visit to the orchards of Mr. Phinney in Lexington, Mass.—

"The trees in the Baldwin orchard, for productiveness, deep verdure, smoothness of bark, and fine shape and proportions, presented a remarkable appearance. One could hardly conceive how the trees could bear more fruit. Although many of the limbs were bent to the ground, under the burden of apples, yet not a prop was to be seen in the whole orchard—the horizontal training of the limbs, of which we have before spoken, effectually preventing them from splitting off. Mr. Phinney was expecting to harvest nearly 1,000 barrels of the Baldwin apple from this orchard, which he intended to ship for Liverpool, on his own account. The fruit for market is carefully picked from the trees, by hand, and immediately put into barrels, which are stored in a dry, cool cellar, built for the purpose, in the orchard, where they remain until a sale is effected. No windfalls are suffered to go into the barrels ; hence his apples command a ready sale and a much higher price than ordinary apples, put up with less faithfulness and care. Mr. Phinney formerly had a great many varieties of fruit in this orchard. Quickly perceiving, however, that the Baldwin apple found here is by far the most propitious to the soil, he turns his attention almost exclusively to the cultivation of that variety. He finds that the great point to be considered, *pecuniarily*, in fruit-raising, is : of the most approved varieties, which will flourish in the greatest perfection in a given location and soil ! The young sweet apple orchard is coming into bearing freely, and is a great pet with Mr. Phinney. Here, too, it is found that one or two varieties are worth all the rest for productiveness and profit. The orchard has an eastern slope, the limbs are trained strictly according to Mr. Phinney's notions, and the trees are very thrifty and vigorous."

Tobacco Dust, as a Protection against Insects.

We last year procured from a snuff mill a barrel of dry, but damaged snuff flour, and prepared dredging boxes, covered with fine bolting cloth, with which we sifted it over the surfaces of any plants attacked by insects, and with most signal success. The snuff should be applied, if practicable, while the plant is still wet with dew, and repeated after every shower. If the boxes are properly made, (like a common floor drudge,) and the snuff perfectly fine and dry, but little time is necessary to go over an acre of plants. Even the rose bug, cabbage louse, thrips on grape vines, &c., all yield to the influence of snuff, and the most delicate plant of the hot house is not injured by its

application. For field vegetables, caustic lime, made into fine powder, while dry, and applied before slaking by contact with the air, will produce similar results.—*Professor Mapes.*

A Short Chapter on Bread-Making.

At no period of our civil history has so much attention been directed to the best means of sustaining life, as at the present. The partial failure of the cereal and root crops in Europe, together with the rapid increase of their already crowded population, has led the chemist, the political economist, and the philanthropist to a clearer and more accurate investigation of the life-sustaining properties of the various articles commonly used as food.

The term "bread" in the broadest sense, can be applied to the main staple, in the support and nourishment of man ; whether it be the "potatoes and point" of the Irishman ; the ostrich, the psanacho, or the wild bull of the Buenos Ayrean Guacho ; the blubber of the Greenlander ; the cassava, banana, or sugar-cane of the West India negro ; the hump steak of the prairie hunter ; the rice of the gluttonous Siamese, the contents of the ample wallet well filled with dates of the Timbucto merchant, and the rich white bread of the American table,—all are to different individuals but so many different forms of "daily bread."

The French chemists have, by the most patient series of analyses, fixed the utmost alimentary limits of almost every article used as diet. Wheat, above all other things, stands pre-eminent as an article of food. With us, as a nation, it forms a most important part of life's comfort. The question before me now is as to the best way of deriving the entire nutritious substance of wheat when presented in the form of baked bread. That we fail in gaining the object by the use of fermentatives, such as yeast, leaven, &c., can easily be shown. The intelligent reader need not be told that fermentation cannot take place in any substance that does not contain sugar in large quantities, and in the proportion that sugar predominates will be the activity of the fermentation. In other words, the activity of the fermentation depends upon the strength or ability of the yeast or leaven to change or convert into carbonic acid gas the saccharine contained in the wheat. Experiments in this respect enable me to speak knowingly. The quantity of nutritious matter destroyed in getting what our wives call a "light raise," is as eight to one hundred ; or, out of every one hundred pounds of flour, we destroy eight, while the balance is largely injured by the process.

Nor is the practice of raising bread by the use of saleratus any better ; indeed, it is infinitely worse. Why are ninety-nine out of every one hundred of the American people afflicted with poor teeth ! Solely from the use of saleratus, not "sweet" things, as many suppose. I am confident that the love of gain ought to lead us to abandon the use of the first ingredient, while the love of health, and above all, a good set of teeth, should induce us to abstain from the use of the latter.

A sweeter and better kind of bread can be made by following the recipe given below. One trial, I am satisfied, will convince any one.

Three cups of flour ;

Two teaspoonfuls of cream of tartar ;

One teaspoonful of carbonate of soda, dissolved in hot water ;

A little salt, and a small piece of butter or lard.

Mix with sweet milk, roll out and bake them quickly. Add a little sugar, and it makes a very nice, healthy cake for children. The same proportions may be carried out to make a large batch of bread.

By placing the bread, when taken from the oven, in a current of sweet, fresh air, it soon recovers the oxygen that was expelled from it while it was in the oven. No bread should ever be eaten while it is hot. It is not fit for the stomach, and will certainly produce derangement,—such as flatulence, acidity, biliousness, &c. It is a want of economy to use warm bread. Many persons will eat three or four warm biscuits, while seldom they eat more than two when they are cold ; and yet the two cold biscuits contain more nourishment than the four warm ones.—*Valley Farmer.*

NEW INVENTIONS. A Horse Rake, which adapts itself to uneven surfaces, by Calvin Delano, E. Livermore, Me. It was used last year by a large number of individuals, who certify its success.

A machine to form gaiters, &c., without seams, and producing most perfect fits, with any of the materials in common use. "It will reduce patent leath-boots to one-third their usual cost."

Good Cows.

The statements in regard to the cows which received the premiums at the late show of the Worcester County (Mass.) Agricultural Society, showed the following results :—

JOSEPH A. REED's cow, which took the first premium, was said to have been a Devon, five years old ; calved the 26th of April. From June 10th to 20th, her milk produced 20½ pounds of butter ; from September 10th to 20th, 15½ pounds of butter. Feed, pasture.

SAMUEL H. FLAGG's cow, which took the second premium, was of "native" breed. Calved May 15. From June 10th to 20th averaged sixteen quarts of milk per day, which yielded 22½ pounds of butter ; from September 10th to 20th, eleven quarts per day, which gave 14½ pounds of butter. Feed, pasture only, in June ; in September, hay at night, (pasture being dried up) with two quarts wheat meal per day.

S. B. WATSON's cow, which took the third premium, calved on the 21st of March. From June 10th to 20th, made 23 pounds of butter ; from September 10th to 20th, 15 pounds of butter ; from April 22d to September 23d, 19½ pounds of butter. Kept with other cows in pasture, with no other feed. Neither breed nor age mentioned.

SIMON CARPENTER's cow, which received the 4th premium, was half Holderness, half "native." Four

years old. Calved in April last. From June 10th to 20th, made 16½ pounds of butter ; from September 10th to 20th, 14½ pounds.

The Society required that a statement should be made of the weight of butter produced in ten days from June 10th to 20th, and in ten days from September 10th to 20th.

Potato Culture.

Messrs. Editors:—In your correspondent Mr. Macomber's excellent article, No. 5, on the culture of the potato, I find much call for self gratulation ; his views exactly coincide with my own, and I feel proud of the relationship. Will you permit me to record two instances of the importance of allowing the crop to take care for itself, after it has been carefully planted and hoed for,

I once had the charge of an estate, on which it was the custom to give the laborers a portion of land to cultivate the potato for their own use, the owner furnishing manure. Six of these men planted together, and, to induce one of them to manage his crop without moulding up, as well as to plant more closely, I gave him the seed for planting. He faithfully performed his part, and after flat-hoeing them twice, they were left to mature. The result was, he dug his crop ten days before his neighbors, and harvested nine bushels more in quantity ; the tubers being all of middle size and free from buttons.

On visiting a friend while planting potatoes, I prevailed upon him to leave a portion of the field unmoulded up during the period of their growth. I was afterwards informed by him, that he left two acres, one half the field, undisturbed by moulding up, and this was the result. He engaged a person to dig the crop when ripe, at a given price per bushel, for the whole field, he having first worked half a day on the moulded up part of the field, to ascertain the price at which he could afford to perform the labor ; but when he had reached the part which had been left unmoulded, he came to his employer and said, he could afford to take up the remainder at a less price, as there was about a double crop. This may, I think, be denominated proof positive. I have this day planted a patch of potatoes, fourteen inches between the rows, and nine inches between the sets in the rows ; what will be the result of such close planting ?

EUGENE HILL.

Milton.

[*Boston Cultivator.*]

DIFFERENT CROPS IN ALTERNATE ROWS. J. D. CHADSEY, of Wickford, R. I., made an experiment last year in relation to the cultivation of onion and carrots in alternate rows. The result was, that a piece planted with onions, in rows one foot apart, produced 507 bushels per acre ; and the piece planted with carrots and onions in alternate rows, at the same distances as on the other lot, gave 380 bushels of onions, and 774½ bushels of carrots per acre. The value of the crop on the first-mentioned lot, was \$209 80 ; manure and expense of cultivation, \$93 10 ; giving a nett profit of \$109 70 per acre. The piece planted with onions and carrots together, gave an aggregate value of \$306 80 per acre ; manure and ex-

pense of cultivation, \$117 59; leaving a nett profit of \$189 21. Part of the onions were sold at fifty cents, and the remainder at forty cents per bushel.—The carrots sold mostly in the field, at twenty cents per bushel. The advantage of cultivating the carrots and onions together, is thought to be owing to the more ready admission of the sun's rays. The onions are sown six weeks before the carrots, and they mature and are taken off before the carrots shade the ground—the latter making their greatest growth in the last half of September, and through October.

TRANSPLANTING EVERGREENS. It seems not to be very material whether evergreen trees are transplanted in April, May, or June. They may be made to live in either of these months when they are properly taken up and set; as it is all important to take up a sod with the tree, it may be as well to transplant this kind early in the season before plowing commences.

It is not necessary to take up a long root with a fir, a hemlock, or a pine; but it is absolutely necessary to take up a sod with the roots.

The bark that covers the roots of pines and other evergreens is very thin and tender, and when the trees are pulled up and set, as we set apple trees, the bark comes off and not one tree in fifty survives. Long roots are not needed, and the trees may be taken up by cutting around at a distance of twelve inches from the trunk when that is not more than five feet in height.—*Scientific American.*

TO PREVENT A BRUISE FROM BECOMING DISCOLORED. Blood can be prevented from settling in a bruise, by applying to the place, a cloth wrung out of very warm water, and renewing it until the pain ceases. The moisture and heat liquify the blood, and send it back to the proper channels, which by neglect, or the use of cold applications, would be coagulated, and fixed in green and black blotches directly under the skin.—*American Agriculturist.*

IMPORTANT DISCOVERY. Dr. Lerryman, of Springfield, Illinois, has invented a process by which butter may be packed and kept for any necessary length of time in any climate, and under any circumstances, in a state perfectly sweet, without salt or any other chemical agent. Butter prepared in this way has been kept for two years, apparently as fresh and sweet as when taken from the churn. Means have been taken to secure a patent for the machine. It is simple in its construction and operation, and is the application of a principle hitherto unknown to butter makers.—*St. Louis Organ.*

TRUE RICHES. The true wealth of community is its labor—its productive labor. A man is not the richer for houses, which he cannot occupy—lands which he cannot use—money that he cannot spend. He might own a continent in the moon, but what would that avail him. He might die of starvation in the vaults of the banks of England, or in the undisturbed possession of the riches of the mines of Peru. Labor is the great source and instrument of subsistence and wealth.

We are under obligations to our brethren of the Vermont Press for the earnest recommendation which they have so generally given to this paper.

□ New subscribers can be supplied with the first number of this volume: and a few copies of the first and second volumes are still unsold.

The Markets.

BRIGHTON MARKET, Thursday, May 24.

At Market—670 Beef Cattle, 15 yoke Working Oxen, 40 Cows and Calves, 600 Sheep and Lambs, 1175 Swine.

PRICES—Beef Cattle—Prices have declined, and we reduce our quotations—Extra \$7 a 7 25; first quality, \$6 50 a 6 75; second, \$6 a 6 25; third, \$5 a 5 75.

Working Oxen—Sales at \$72, 78, 85, 90, 100, and 115.

Cows and Calves—Sales at \$17, 19, 23, 26, 30, 35, 42 and 51.

Sheep and Lambs—Lambs from \$2 to 3 75; Wethers, from 2 50 to \$5, and a lot at \$6 25.

Swine—Small lots to peddle 4½c for Sows, and 5½c for Barrows; old Barrows, 4½c. At retail, from 5 to 6½.

BOSTON, MAY 24. WOOL. There have been some sales of the various descriptions of American Wool during the past week, generally in small quantities. Manufacturers will not purchase largely till after the new clip comes to market.

Prime Saxony Fleeces, washed, lb.	42	a	45
American full blood, "	37	a	40
do ¾	"	35	a 37
do ¾	"	32	a 35
do ¾ and com.	"	28	a 30
Smyrna, washed, "	16	a	22
do unwashed, "	8	a	14
Bengasi, do	"	7	a 9
Buenos Ayres, "	"	8	a 20
Extra Northern pulled lamb, "	38	a	40
Super do. do. do.	33	a	35
No. 1 do. do. do.	29	a	31
2 do. do. do.	23	a	25
3 do. do. do.	15	a	16

—*Boston Courier.*

BOSTON, MAY 26.	
Flour, Michigan, \$4 87 a 5.	Genesee, \$3 12 a 5 25.—
Ohio Round Hoop, \$3.	Corn Meal, \$3 12.
GRAIN. Yellow Corn, 60 a 6½. White do, 56c. Northern Oats, 40c. Eastern do, 38½. Northern Rye, 65c.	
Plaster, ground, casks 500 pounds,	1 38
barrel 320 "	1 00
per ton, casks,	5 25
Lime, Thomaston, cask,	60 a 90 cts.

FANEUIL HALL MARKET.

WHOLESALE.		EGGS, doz.	
Beef, fresh, lb.	7 a 14	Apples, barrel,	4 00 a 4 50
Mutton, 1st qual.	6 a 12	Beans, bush,	1 50 a 1 75
2d "	4 a 8	Peas, bush,	0 00 a 0 00
Lamb, quarter,	1 00 a 1 25	Potatoes, barrel,	2 00 a 3 50
Veal, lb.,	3 a 7	Onions, bush,	0 00 a 2 00
Pigs, roasting,	1 00 a 1 22	Honey in comb,	10 a 20
Chickens, lb.,	10 a 12	SEED—RETAIL.	
Turkeys,	10 a 12	Clover, North, lb.	13 a 14
Geese, mongrel,	1 25 a 1 50	Southern, "	8 a 9
Pigeons, dozen,	1 00 a 0 00	White Dutch, "	20 a 25
Pork, per 100 lbs.	6 00 a 6 75	Lucerne, or French, "	33
Lard, best, pr. bbl.	7 00 a 7 50	Herdsgrass, bush,	3 25 a 3 50
Western, keg,	7 50 a 8 00	Red Top, bush,	
Butter, lump, lb.	16 a 20	Northern, "	1 25 a 0 60
do. firkin,	15 a 20	Southern, "	68 a 88
Cheese, new milk, 7½	a 8	Orchard Grass, "	a 2 00
do. four meal,	5 a 6	Fowl Meadow, "	2 50 a 0 00

BEANS VERSUS BUGS. Capt. Simon Parkhurst, of Royalton, chanced to drop some beans in a hill of cucumbers, and the vine-plants in the hill with the beans were unmolested by the bugs, while the others were destroyed. He is satisfied, by the trial which he has made, that beans growing with the vines will keep off bugs. If so, it is easily done, and a general knowledge of it may be very useful.

The best top dressing for a strawberry bed is *burnt sods*. Pile up the brush and rubbish you have at hand in layers with the sod, and set fire to the heap; let it smoulder away for several days, till the wood is pretty well burnt out, and the sods well roasted. Then overhaul the heap, chop and beat it up fine with the spade, and after loosening up the soil in the bed, give them a coat an inch or two in thickness. It will give new life to the plants, and set them in a way to give you an uncommonly fine crop.—*Horticulturist*.

MULCHING FRUIT TREES. A correspondent of the *Horticulturist* planted 150 trees in an orchard in very good but rather dry soil. All were planted with equal care, but a third of them were *mulched*, or the surface of the ground when planted covered with 6 inches of litter. Those thus treated all lived; but 15 of those not mulched died in the hot dry weather of midsummer. It is not stated that the soil was kept clean and mellow around them; which will often save the life of trees, when they would die of neglect.

Domestic Economy.

BOILING POTATOES. The correspondent of the *London Times* says, "The following method of dressing potatoes will be found of great service at this season of the year, when the skins are tough and potatoes watery: Score the skin of the potato with a knife lengthways and across quite round, and then boil the potato in plenty of water, with salt, with the skin on. The skin readily cracks where it is scored, and lets out the moisture, which otherwise renders the potato watery and wet. The improvement to bad potatoes by this method of boiling is very great; and all who have tried it find a great advantage in it, now that good potatoes are very difficult to be obtained."

TO MAKE A STOVE AS BRIGHT AS A COACH-BODY BY TWO APPLICATIONS A YEAR. Make a weak alum-water, and mix your "British Lustre" with it, perhaps two tea-spoons to a gill of alum-water—let the stove be cold, brush it with the mixture, then take a dry brush and dry lustre, and rub the stove till it is perfectly dry. Should any part before polishing, become so dry as to look grey, moisten it with a wet brush, and proceed as before.

TO REMOVE STOPPERS FROM DECANTERS. With a brush and warm water and soap, clean around the stopper; wipe dry and let it grow cold; take the end of the stopper between the thumb and finger of one hand, while, with the other, you hold the neck of the

bottle over the flame of a spirit lamp, and turn it round briskly for about a minute, or a longer or shorter time according to the thickness of the glass, and the size of the vessel. The heat will expand the glass of the bottle before it affects that of the stopper, which will come out, almost, with a touch. One that has been broken close off may be removed in this simple way.—*Am. Ag.*

Curing Bacon Without Smoke.

To make the best bacon fat your hogs early, and fat them well. By fattening early you make a great saving in food, and well-fattened pork makes better bacon than "lean" pork. Then kill as early as the weather will allow, and salt as soon as the animal heat is gone, with plenty of the purest salt and about half an ounce of saltpetre to one hundred pounds of pork.

As soon as the meat is salted to your taste, which will generally be in about five weeks, take it out, and if it has been covered with brine, let it drain a little. Then take good black pepper, finely ground, and dust on the flesh side and on the hock end as much as will stick; then hang it up in a good, clean, dry, airy place; if all this is done as it should be (it ought to be done now) you will have no further trouble with it, for by fly time in the spring your bacon is so well cured or dried on the outside that flies or bugs will not disturb it.

Curing bacon is a little like the Irishman's mode of making punch. He said "put in the sugar, then fill up with whiskey, and every drop of water you put in after that spoils the punch." Just so with curing bacon; after following the directions given above, every "drop" of smoke you put about it "spoils" the bacon. D. S.

[*Louisville Journal*.]

To increase the fire under boiling water is wasteful—the additional heat does no more than increase the evaporation.

A man in New York advertises a new washing machine by the captivating title of "The Ladies Delight."

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,
and sent to subscribers on the following

TERMS:

For a single copy,	- - -	50 cents.
5 copies, sent to one address,	- - -	3 00
10 " " " "	- - -	3 00
15 " " " "	- - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

☐ Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

SCHOOL JOURNAL

AND VERMONT AGRICULTURIST.

Vol. III. WINDSOR, VT., JULY, 1849. No. 3

THE SCHOOL JOURNAL.

First School Law of Vermont.

Passed 22d October, 1782.

An Act for appointing and supporting Schools for the due encouragement of learning, and the better regulation and ordering of Schools.

1. Be it enacted, and it is hereby enacted by the Representatives of the freemen of the State of Vermont, in General Assembly met, and by the authority of the same, that each town in this State, which cannot conveniently be accommodated by one school, shall have power, and they are hereby empowered in any legal town meeting by such ways and means as they shall devise, to divide into so many districts as they shall find convenient, and the same to alter from time to time. And each town shall appoint one or more meet person within each district, to continue until others shall be chosen, who together with the Selectmen of the town, shall be Trustees of schools in such town. And such Trustees, or the major part of them, and their successors, shall have power and they are hereby authorized and empowered to lease such lands, and real estate, and loan such monies, as do or shall appertain to such schools as are, or shall be given for the use aforesaid; and to commence any suit or suits that may be necessary for the recovery and obtaining of such lands, monies, and other estates, and to take leases, bonds, and other securities to themselves and their successors, for the use of such schools, and to sue and recover thereon. And the Trustees shall annually pay over the money arising from the lease of such bonds and other real estate, and the loan of such monies, to a committee of each district respectively, in proportion to the number of lists. And all such lands, leases and other securities shall, by said Trustees, be lodged with the town Clerk of the town, who is directed and required to keep an account thereof, and hold the same under the direction of said Trustees, for the purpose aforesaid; and such Trustees shall render an account of their doings in respect to such their trust, to the town by whom they were appointed, when thereunto required. And the inhabitants within the several districts, are empowered from time to time, to meet to transact the business of their respective districts, to choose a Moderator, District Clerk, a Collector of rates, and a committee of one or more persons to take care of the prudential affairs of the dis-

trict for which they are chosen. And the committees shall have power, and they are hereby empowered, in their several districts, to raise one half the money that shall be necessary for building and repairing a School house, and supporting a school in their respective districts, by a rate on the list of the polls and rateable estate of the inhabitants of such districts. And the several districts are further empowered, at any meeting warned for that purpose, to raise the other half of the money for the purposes aforesaid, either by a tax on the list of the polls and rateable estate of the inhabitants of their respective districts, or by subscription in proportion to the number of children any person shall send or subscribe to send to such district school. And in every of the above cases, the committees shall make the whole into a rate bill, by a just estimation in money, according to the true intent and meaning of such vote or subscription as aforesaid; and if the same shall not be paid by the time appointed, they shall deliver such bill to their respective collectors, with a warrant to collect the same, signed by some Councillor or Justice of Peace; and such collectors shall have the same power on collecting district taxes, as the collectors of town rates; and shall be accountable to their respective committees for the sum due on such bill. And the district committees shall severally have the same powers with respect to lands or any other interest or estate, given, granted, or in any wise set apart for the use of schools in their respective districts as are in this Act given to trustees of town schools and shall be in like manner accountable to their several districts.

And the Judges of the County Courts, in their respective Counties, shall have power to appoint Trustees of County schools; who shall have the same powers in all matters relating to their trust, as Trustees of Town schools; and shall be in like manner accountable to the Judges by whom they were respectively appointed. And said Judges, calling to their assistance the Justices of the Peace in their several counties shall have power to lay a tax on the same, for the purpose of building a County School-house in each county; to be collected by a warrant from the County Treasurers, in the same manner as State taxes are.

2. And be it further enacted by the authority aforesaid, that all Trustees and Committees of schools shall have full power to purchase any Lands or other Estate, and to sell and alienate such Lands and Estate, to by

them purchased, for the use of their several Schools, under the Direction of the Judges, Town or District by whom they were appointed. And if any Trustee or Committee man shall embezzle, misapply or conceal any Money or Estate belonging to any town, county or district for the use of Schools as aforesaid, he shall be liable to be removed, and to be sued in an action of account by an Agent or Agents for that purpose appointed by the Town, Judges of County Court, or District by whom such Trustee or Committee man was appointed. And if it shall be found on trial that such Trustee or Committee man has embezzled, misapplied or concealed any Money or other Estate, as aforesaid, Judgment shall be rendered against him or them for double the sum so embezzled, misapplied or concealed; and such action prosecuted by order of the Judges of the County Court shall be prosecuted and determined before the Superior Court in their proper Counties.

Provided always that this act shall not extend to any Estate formerly granted by any person for the Benefit of any particular School or Schools; nor to grants of any Interest formerly made by any person or particular town for the use of Schools or for the use of any particular School wherein the Grantor hath committed the trust thereof to any particular person or persons with particular Directions for a continual succession in such trust. Any thing contained in this Act to the contrary notwithstanding.

FIRST VERMONT SCHOOL LAW. We are indebted to HENRY STEVENS, Esq., of Barnet, for a copy of the First School Law of Vermont, which we publish in this number. Let it be read, and let us aim to secure the results so distinctly before the minds of our fathers,—an *adequate* education for all the children of every town.

For the School Journal.

How can our System for the Improvement of Common Schools be rendered more Efficient?

That much good has already been accomplished under its operation is obvious, in the better qualification of teachers, in their efforts for self improvement and the improvement of their schools, in the increased number of commodious and comfortable school houses, and in the general interest which has been awakened in relation to the subject on the part of the people. But the spirit of the age is *progress*, and no one who has any regard for the good of society, can contemplate the great evils and deficiencies which are still incident to our schools, and the overwhelming importance of a right education of our youth, and yet regard with indifference, the rapid march of improvement in almost every other enterprise, while this noble object is suffered to languish, and to advance with a comparatively tardy pace. What then can be done to give more life and energy to the system, to wake up the whole of our community to a just appreciation of the value and importance of thorough education, and to enlist the active efforts of all classes, superintendents, committees and teachers, parents and children, farmers, mechanics and professional men, in the

great work of properly educating the generation which will soon occupy our places?

Perhaps there is no community on earth which displays more energy of character, combined with correctness of moral principle, than the people of Massachusetts. The successful spirit of enterprise which has been developed in that State, the staple productions of which it has been sarcastically said are granite and ice, clearly exhibits the value of education, through the aid of which a people may surmount all natural obstacles to success and nobly triumph over every discouragement. The people of Massachusetts have discovered the true element of success, the only sure foundation of social and individual prosperity; and no pains or expense is spared in the education of their children. On a territory not so large as Vermont they have three colleges richly endowed, two normal schools for the preparation of Teachers of common schools, numerous academies and literary institutions of a high order, and the most perfect system of common school instruction in the world.—School houses are constructed on the most approved plans, often at an expense of \$5,000, \$10,000 or \$20,000, and the highest officers of the State consider themselves honored by taking a part in exercises designed to promote the paramount enterprise of popular education.

The wealth that is flowing into Massachusetts, is in a great measure to be attributed to the wholesome instruction which the community have enjoyed in early life, and her powerful influence in the Union rests on the same foundation. Ample has been the compensation therefor which she has received for her magnificent outlay in the cause of education.

The deep interest which has been enlisted on the part of the people of that State in this important object, has been awakened mainly through the efforts of Hon. HORACE MANN, late Secretary of the Board of Education. He has received a salary of \$1,000 from the State, and it is believed, about the same amount from private munificence, which has enabled him to devote his time and powerful talents wholly to the cause. He has traversed the State, and lectured in every village, awakening the attention of the people to the importance of the subject, and putting in operation all those plans which would insure the improvement of the schools.

By reviewing what has been so successfully accomplished in a sister State and the means by which it has been effected, we may learn what is needed in our own State. If our legislature would make a more liberal appropriation for the salary of the State Superintendent, so that he could be enabled to visit every county and hold public meetings in all the principal villages; and also an appropriation for sustaining Teachers' Institutes for a few weeks in each county, we might expect to see new vigor infused into the system, and a deeper interest awakened throughout our community.

By fixing the salary of our State Superintendent at \$200, provision was made only for his giving a general and uniform direction to the system; but it could not be expected that he would give any considerable

portion of his time to this object, for a compensation so meagre. His services, so far as they could be expected, have been invaluable, and the three able Reports which he has presented, embrace a great amount of valuable information in regard to our schools, with suggestions for their improvement; and altogether exhibit the most research and labor of any documents which have come from the press in Vermont. But it is obvious that no man however talented, can accomplish so much by devoting only a small portion of his time to any enterprise, as he can by giving to it his whole time and energies; and this office, above all others in the State, opens a field for the useful and honorable exercise of the most elevated talents. It is of very great importance that the State Superintendent should be able to visit all the Counties for the purpose of holding consultation with the the Town and County Superintendents, and enlisting more active and judicious effort on their part. By a mutual communication of information and opinions, each would become more interested in their work, and better qualified for their respective duties.

By holding meetings, also, and making public communications to the people, concerning the evils which are found to exist in relation to the schools, and their appropriate remedies, the community will be awakened to the exercise of a deeper interest, and to coöperate more efficiently in efforts for their improvement. It is evident, then, that the salary of the State Superintendent should be placed high enough to command the entire services of our most able men. Massachusetts is testing the advantage of the principle "There is that giveth and yet receiveth." Vermont may suffer from practicing on the opposite principle, "There is that withholdeth more than is meet, and it tendeth to poverty."

The poverty of Vermont will preclude the expectation of the establishment of a Normal School, at present; but as a substitute, Teachers' Institutes may be held in the several Counties with manifest advantage. Many counties have tested the benefits which may be derived from them; but they have been generally sustained at the private expense of a few individuals. The public have thus enjoyed the advantages of them, while the tax for their support has fallen on a few. If, however, the principle asserted in a recent political convention is correct, "That the education of the children of the State is a matter of public concern, which the State ought to care for, and the property of the State to pay for,"—a principle which will probably be admitted by all parties to be correct, it would seem proper that a liberal appropriation should be made for this object. A sum sufficient to sustain an Institute a few weeks in each county, would amount to only a trifling tax, while a large number of teachers would be qualified to labor in their schools with far more profit and advantage to their pupils, and the community would derive a benefit much more than an equivalent for the expense.

J. P. F.

INDICATION. Thus he dallied with his thoughts, and with all things, and wasted his strength on tri-

fles; like the lazy sea, that plays with the pebbles on its beach, but under the inspiration of the wind might lift great navies on its outstretched palms, and toss them into the air as playthings.

SUMMER SCHOOLS. Mr. Tufts, Superintendent of Common Schools in Windham County, concludes some notes of visits to schools with the following remarks:—

"In visiting the summer Schools I observe 1st, that the black-board is used too little—2d, that the small scholars have too few general exercises, to amuse, arouse, and interest them—3d, that many teachers know no other way than to hear the scholars all read mechanically twice each day, asking no questions out of the book, and 4th, that the first class of teachers accomplish more than four times as much in advancing their pupils, as one called a *common* teacher, and 5th, that there is only now and then an individual who appreciates the difference between a *first-rate*, and an *ordinary* school. Female teachers in the County deserve much credit for the pains they have taken to qualify themselves for teaching, and for their indefatigable and exhausting labors in the school room, for which they receive little money, and often *no thanks*, many of them sacrificing their health if not their lives, in the laborious work of instructing the young."

Music of Insects.

A sound like the humming of bees is often heard in lonely rural retreats, among mossy dells and leafy solitudes; the poet heard this music of the groves as he penned the following couplet:

"Not undelightful is the ceaseless hum,
To him who, musing, walks at noon."

Sounds like the humming of bees are frequently heard, though not a single insect is to be seen. The existence of these diminutive creatures,—who only appear in the evening,—is said to terminate before the dawn of day; though short, it is a life of incessant pleasure. By naturalists they are now classed as coral flies, who congregate in millions, as Gardner supposes, for the pleasures of music and the dance.

It is related of Beethoven that those imitative sounds in his celebrated Pastoral Symphony were caught from nature; that he employed the violin, in that extraordinary composition, to represent the soft, fluttering stir of the insects,—the hum in a noon-tide warmth of a summer's day. He used to sit upon a stile in the environs of Vienna, a lovely, sequestered spot, and listen to the ceaseless sound of unnumbered winged insects dancing in the air.

Plutarch tells us that when Terpander was playing upon the lyre, at the Olympic games, and had enraptured his audience to the highest pitch of enthusiasm, a string of his lyre broke, and a grasshopper immediately perched on the bridge, and by its voice supplied the loss of the string, and saved the fame of the musician.

The Athenians kept these delicate creatures in cages for the sake of their song, and called them the nightingales of the nymphs. As in the case of birds, the males only sing.

For the School Journal.

Errors in Pronunciation.—No. 3.

The rules for the pronunciation of the English language, though apparently complicated, are, in reality, exceedingly simple to *natives*. The only difficulty lies in the great number of exceptions. And, as the exceptions rarely, if ever, occur except in *familiar* words, they cause no embarrassment but to foreigners. As I do not know any book in which these rules are formally stated, I will here present a few of them, chiefly with a view of noticing some exceptions in which the pupils of the common school, and even of some of the higher seminaries, are apt to blunder, in reading exercises.

1. When an accented syllable ends in a vowel, it takes the long sound, as in *ba'by*, *Pe'ter*, *fi'ery*, *lo'tion*, *bu'bo*, by.

2. When the accented syllable ends in a consonant, the vowel takes the short sound, as in *bab'ble*, *beg'gar*, *bil'low*, *bot'tom*, *but'ter*, by'law.

3. An *e* mute after the consonant restores the long sound, as *fat*, *fate*; *din*, *dine*; *rot*, *rote*; *but*, *rute*. When the vowel is an *e*, however, the long sound is restored by placing the two *e*'s together *before* the consonant, as in *green*, *deed*.

4. In unaccented syllables, the sound of all the vowels is almost exactly alike, and is called their *obscure* or *indistinct* sound. Inattention or ignorance of this rule is one of the chief causes of bad reading. The words *chlorine*, *fragile*, *docile*, *fertile*, *granite*, *Laura*, *soda*, *era*, *sofa*, *comma*, *vista*; and a vast number of similar terms, are very generally mispronounced for this reason.

The following words exhibit the obscure sounds of the vowels in their regular alphabetic order: *rivel*, *brier*, *ability*, *confess*, *sulphur*, *martyr*. The words *marine*, *caprice*, *bombazine*, *routine*, are exceptions to the fourth rule.

To conclude this number by observing, that many pupils are at a loss to know the proper sounds of *y* and *w*, when used as vowels. They ought to be instructed that the former is always sounded like an *i*, and the latter like a *u*, in similar situations. Neither are used but for final letters, though sometimes retained in compounds, as *joy*, *joyful*; *sorrow*, *sorrowing*. P.

Pittsford, June 4, 1849.

Hints, Plans and Methods.

Scholars in the Alphabet may be classified with good results as in any other branch of study. Four, five, or six, however, will generally be found enough for one class. This class should have its number in school, (as fifth or sixth class) and should be called to read with as much regularity and as much ceremony as any other.

Reading classes should generally be stationed as far from the teacher as possible, that the scholars may become accustomed to use a tone of voice so loud and distinct as to be easily understood in any part of the room.

Scholars should be accustomed to study their reading lessons as regularly and faithfully as any other.

The practice of having scholars commit short and spirited pieces for rehearsal or declamation, will be found to aid them in their efforts to improve in reading.

All the scholars in school should have some exercises in numbers or arithmetic daily. The youngest should learn to count, by counting their fingers, the number of scholars in the class, of panes in the window, or of balls on a wire in the numeral frame. Older ones should have exercises in reading and writing numbers, in adding, subtracting, multiplying, dividing, and in reciting the different tables; and all who are studying arithmetic in a book should be classified, and recite as regularly as in grammar or geography.

The several columns of the multiplication table may, now and then, be recited by the class, or by the school in concert, backwards and forwards. The teacher may ask questions promiscuously to individuals, or he may arrange those that are learning it as a class, on the floor, allowing those who answer correctly, "to go above those who miss," if he thinks proper. This exercise may be varied in several ways; the scholars may be permitted to question each other in turn, or the one at the foot of the class may be allowed to propose a question to any in the class, and if the scholar fails, and the one who proposed it answers correctly, let them change places in the class. These methods have been found to awaken a deep interest in the exercise.

It is well to have scholars write on slates a part of the time, instead of using pen and paper. They may imitate a copy written by the teacher on the black-board, or write down, in their own language, facts of information communicated by the teacher.

When his scholars, having tried repeatedly to solve a difficult question in arithmetic, call upon him for assistance, a teacher of our acquaintance used to say to them pleasantly, "Have you tried it faithfully?" "Have you gone just as far as you can?" "Have you come to a full stop?" "Well, do you not know what the spelling book directs you to do when you come to a full stop? No sir. "Why count six and go on." This, or some other pleasant remark, would generally so change the current of the scholar's thoughts, relieve his weakness or quicken his perceptions, that he would be able to discover his mistake, and surmount the difficulty without assistance.—*Ohio School Journal*.

A GOOD EXAMPLE. Mr. C. T. Alvord, of Wilmington, Vt., writes,—“I may be mistaken, but I think this town, for this year, will bear a favorable comparison with other towns, as a reading community, all things being taken into consideration. We take, at the present time, 83 copies of *The Cultivator*, between 40 and 50 of the *School Journal* and *Vermont Agriculturist*, about 12 of the *Boston Cultivator*, 6 of the *New England Farmer*, and 1 of the *Genesee Farmer*; these being about one-half of the regular newspapers taken in the place. The town embraces a section of country six miles square, lying on the eastern slope of the Green Mountains, and containing one of the highest peaks within the borders of

the State. The surface is generally rough and uneven, and a large portion of it yet remains covered with timber. The inhabitants, about 1200 in number, are mostly engaged in that part of agriculture which consists in the raising of neat stock, and the manufacture of butter and cheese, to which is added, in the spring season, the making of maple sugar."—*Cultivator*.

Common School System in Maine.

The friends of the common school education had for several years been engaged in efforts to awaken the attention of the public more fully to that cause. Advocates for improvement in schools had arisen in different parts of the State. The Governor had strongly commended the subject to the attention of the Legislature. Conventions had been held, and the legislature had been memorialized in behalf of the cause. After several years' effort, the movement was at length organized by an act of the Legislature, establishing a Board of Education. This act became a law July 27th, 1846. Under the auspices of this Board, its Secretary, assisted by the concurring sympathy and aid of the State authorities, the free public schools have secured the attention and enlisted the interest of the people in every section of the State, and thus far the expectations of the sanguine friends of education have been realized. Let us examine this Board and the mode of its action.

OBJECT OF THE BOARD OF EDUCATION.

This is not to take the schools from the hands of the districts, the school agents, or the superintending school committee. Neither is the Board vested with any control whatever over the schools. These are left in all respects in the same legal situation which they occupied previous to its establishment. The power of the Board is simply moral and advisory.— Its object is to inquire into the best methods of conducting schools; to examine the condition of those in operation throughout the State, and deliberate upon the proper mode of improving them; to take into consideration the subjects of school houses, text books, school libraries and apparatus, qualifications of teachers, intellectual and moral training, and the promotion of education in the new settlements. On these and kindred subjects, the Board is required to make to the Governor an annual report, presenting facts and offering suggestions for the information and advice of the authorities and the people of the State. This organization was designed to have the effect of an additional spring inserted into the machinery of education, by which a new power should be supplied, and a greater impulse communicated to the whole system of public schools.

STRUCTURE AND PROPOSED ACTION OF THE BOARD.

The Board of Education consists of thirteen members, one for each of the thirteen counties of the State. These are to be elected annually by the superintending school committees of the several towns of the different counties, assembled in convention at the shire towns. The members of the Board thus elected are required to meet annually in the month of May, and at such other times as they may deem nec-

essary, at Augusta, the capitol of the State, for mutual counsel and deliberation. The individual members are to take in charge the interest of the cause in their own counties. Their compensation is simply sufficient to pay their necessary expenses; no remuneration being made for time or services rendered.

The Board is required, each year at its annual meeting, to elect a Secretary, who is to constitute its chief executive officer. It is made his duty to carry into effect, as far as may be, the plans which the Board may adopt; to attend the convention of superintending school committees held in the several counties annually, and to confer with committees, teachers and citizens generally on the interest of education. He renders to the Board an annual report, setting forth his proceedings and embodying the results of his investigation during the year. His salary (if recollection serves) is \$1,000 per annum—a sum quite inadequate to meet the expenses and reward the arduous labors of that officer.

The Board is so constituted as to be in communication, on the one hand, with the State government, and, on the other, with the officers of schools and the friends of education in the State at large. At its annual meeting it is to go into consultation upon the condition of the schools generally, as the facts pertaining to them are brought in and presented by the individual members and the Secretary. These facts with appropriate suggestions, first communicated to the governor, are to be transmitted to the legislature for its information. By the latter, they are ordered to be printed and circulated over the State. From the annual meeting the members of the Board are to return to their several counties and meet their constituents, the school committees of the towns assembled in county conventions. To these they are to submit the views and action of the Board, and make report of their own doings, when a new election of members of the Board takes place. From the county conventions the committees return to the several towns, informed and prepared to distribute the views and communicate the impulses of the central Board over every part of the State.

It may be as appropriate to state here as elsewhere, that in accordance with the recommendations of the Board, the Legislature made provisions for the establishment of county teachers' Institutes throughout the State. An annual appropriation of \$2000 was made to each of the thirteen counties for this purpose. These institutes are placed, each under the charge and direction of the members of the Board for the county in which it is held; and thus connecting links are established over the State between the members of the board and the teachers of the schools.—*Cong. Journal*.

CARE OF IDLE BOYS. It is stated that the constables of Saco, Maine, have been ordered to arrest all idle boys who may be found in the streets, during ordinary school hours, and carry them to such a place as the superintendent of common schools may direct. It would be well if such a practice were enforced in every considerable town.

American Institute of Instruction.

The next annual meeting of the AMERICAN INSTITUTE OF INSTRUCTION is to be held at Montpelier.—The following remarks upon its object, its labors, and its spirit, are from a statement made by the President, Mr. GEORGE B. EMERSON, at the last annual meeting :—

Eighteen years ago, a few teachers and other friends of education met together in Boston to see what could be done to strengthen and advance the cause in which they were interested and engaged. After several meetings, they agreed to extend their invitations to all, in other parts of the country, as well as in Massachusetts, who should feel inclined to meet with them. The invitations were widely circulated; and, in August of 1830, several hundred persons, most of them teachers, assembled in Boston from at least eleven different States, and formed this Institute.

The leading object of the American Institute of Instruction is to promote the cause of popular education, by diffusing useful knowledge in regard to it.—The members met originally, and they have continued to meet, for the purpose of elevating the character of instruction, of widening its sphere, and of perfecting its methods; for the purpose of raising the teacher, by making him feel how high and noble is the work in which he is engaged, how extensive and thorough must be his preparation, and how entire his devotion; for the purpose of making more apparent to our fellow-citizens the absolute importance of education to the existence and continuance of our free institutions, and to the advancement of our race; and thence the duty of improving our schools, especially our Common Schools. They have met, and they continue to meet, to compare observations and opinions, and to contribute the experience of each to a common stock for the benefit of all. In short, they meet to quicken to a warmer glow the fire in their own breast, and to kindle it as far as possible in the breast of others.

The Institute has continued to meet annually until this day, holding a session of three or four days, and hearing from twelve to seventeen lectures, each year. It has enlisted in its service many of the ablest and most distinguished friends of education; and, at its annual meetings, it has had lectures, reports, and discussions upon most of the subjects of interest to the practical teacher, and to the community as acted on by him. Many of these reports and lectures, delivered by men eminent in their respective professions, and by skilful teachers, upon subjects with which they were most familiar, are published, and form a body of science, thought, and practical wisdom, unsurpassed, we think, by any series of works in the language on the subject of education.*

From these lectures, from the discussions which have annually taken place, from the free interchange of opinion, and from the acquaintance we have formed

with each other's feelings and character, we think we have derived substantial benefits. We think we have been getting higher views, and deeper and more earnest convictions, of the extent and importance of the teacher's work, of the objects at which he should aim, and the motives by which he should be influenced.—We wish to extend these benefits to others.

Thus you see what we have been doing, and what we mean to continue to do. Most of us who have come to represent the American Institute are practical teachers, who have given and are giving our lives to the work of instruction. We are all deeply and devotedly interested in the advancement of the cause of education. We have a strong fellow-feeling with teachers, and we ask them to come and take counsel together with us.

Many of us are, and most of us have been, teachers in the Common Schools. These invaluable institutions are the objects of our special interest. These we seek to elevate,—we pray that we may see elevated. As brothers, sympathizing with those who are teaching in them, and with those whose children are taught in them,—as patriots, as Christians, as men, we long for the improvement of these schools; where only are the great masses of our fellow-citizens educated, and where if they are not well educated, most of them are never to be well educated at all, anywhere. These schools, the Common Schools, we seek to do something to make what they should be.

We are here as citizens to assist in building up schools, because we believe that a good school is a temple of liberty; that education is the most important pillar in the fabric of a free state; that, in a political as well as in a moral sense, it is only the truth, the knowledge of the truth, which can make men free. We may not present to you many strikingly new truths; yet we do not despair of even saying some things which are new. Devoted, as many of us are, life and heart, wholly to the teacher's work, we humbly believe that we do sometimes discover something new; new methods, new modes of influencing the conduct, new modes of presenting truth, and new modes of acting on the mind of a child. We at least perceive new relations between things old and familiar, and a new value in things known and despised. Walking, as we often do, on the shores of the vast ocean of infinite truth, we sometimes pick up a stone more beautiful and precious than we have seen before; and we feel that we are revived and invigorated by the air that breathes from that ocean towards which we are looking.

But, if we cannot often offer you a new truth, we can at least invite you to look with us at some truths that are old. We believe, and we are here because we believe, that the most precious thing under heaven,—if, indeed, it is to be considered *under* heaven,—is a highly endowed and highly educated human soul; but we believe that the soul *must be educated*; that the completely uneducated soul is brutish, and little better than the life of a beast; and he therefore who aids another in his education, in the awakening and development of his faculties, offers him the most precious gift that one human being can offer to another. Souls

* The meeting at Bangor was the nineteenth, and the volume containing the lectures delivered there is the nineteenth of the series.

of the highest endowments, of boundless capacities, we believe to be embodied, by the hand of the Infinite Father, along these plains, through these woods, on these hills, by these shores,—to be gathered in these school-houses, as profusely as in any, even the most favored spot on earth. We wish you to learn, with us, how to value them, how to educate them, how to render their minds—to use the noble language of 'the first President of this society—"the fittest possible instruments for discovering, applying, and obeying the laws under which God has placed the universe." This we believe to be the great object of the science of education. We believe, and we are here, again I say, because we believe, in the almost boundless influence of the teacher,—the right-minded, right-hearted, and rightly-informed teacher,—in moulding this priceless soul, in forming it to this great end. But to do this,—to do it well, to do it as it should be done, indeed, to do it at all,—the teacher must become right-minded and right-hearted himself; that is, he must have his intellectual and his moral nature rightly and highly educated.

Come, then, teachers, and endeavor to learn with us, how to educate ourselves that we may help to educate God's children to understand his laws, and be the ministers of His will: to *discover, apply, and obey* the laws under which He has placed his universe.—Let us endeavor to learn to fill ourselves with knowledge, that we may be able to dispel ignorance; to understand the laws of mind, that we may act upon the mind; to apprehend aright the truths of science, that we may present them aright to the ardent and inquiring mind of the child; to study his moral nature, and train our own, that we may overcome his rising, angry, and fierce passions by our gentleness and kindness; prevent his falsehood by our truthfulness; overcome his stubbornness by our patient forbearance; his distrust by our confidence; his fear and his enmity by our love; in one word,—his evil by our abundant good.

The world rings with the harsh and horrid sounds of war. Let us do what we can to raise up a generation of lovers of peace, by filling souls with peace, in the spirit of Him whose blessing was peace,—in the spirit of the God of peace.

The happiness of thousands of homes is sacrificed to the demon of intemperance and inordinate desires. Let us learn and let us teach to be temperate in all things. Let us show, by precept, and a thousand times more by our example, the great lesson of self-control; that he that ruleth his own spirit is greater than he that taketh a city.

The fair face of God's beautiful earth is deformed by the fierce struggles that are going on upon its surface for power and wealth; each one, among millions, clutching ravenously, and holding desperately, whatever he can reach. Let us do what we can,—we may each do something,—we may each do much, with every one of those placed within our influence,—to supplant or prevent the growth of these selfish passions, by awakening the soul to the love of the true and the beautiful in the creation; to a perception of the loveliness of charity, and the greatness of hu-

manity and self-denial; by endeavoring to substitute the spirit of coöperation for that of competition; the ambition of helping one another for the emulation of surpassing one another.

We have come here, then, because we think this work of education is one of the best and noblest in which men can be engaged; and we have come to ask you to aid us in it, to listen to our lectures, to share in our discussions, to add your experience to ours, to correct us if you think us wrong, to help us if you find us right.

SCHOOL ROOMS. Some recommend that the walls of school rooms should be neatly *whitewashed*. Certainly—all but the *white*. Some color should be added, for the sake of the eyes,—a light blue, for instance, or orange.

SEVEN DIRECTIONS—

1. Never handle a book with dirty fingers.
2. Never wet your fingers to turn over the leaves.
3. Never put a book to your mouth.
4. Never let the corners get bruised.
5. Never make and *dog's ear* leaves.
6. Never lay a book down open, with the back up.
7. Never lay it down ANY WHERE, except in some safe and tidy place.

PUZZLE. Take nine from six, ten from nine, and fifty from forty; and leave six as the amount of the several remainders added together.

ALPHABETS. The English alphabet contains 26 letters; the French contains 25; the Hebrew, Chaldee, Syriac, and Samaritan, 22 each; the Arabic 28; the Persian 31; the Turkish 22; the Georgian 36; the Coptic 42; the Muscovite 43; the Greek 24; the Latin 22; the Slavonic 25; the Dutch 26; the Spanish 27; the Italian 20; the Ethiopian and Tartarian, each 202; the Indian of Bengal 21; the Burmese 19; the Chinese have, properly speaking, no alphabet, unless we call their whole language by that name:—their letters are marks, or rather hieroglyphics, amounting to 80,000.

CORRECT SPPAKING. We advise all young people to acquire, in early life, the habit of using good language, both in speaking and in writing, and to abandon as early as possible the use of slang words and phrases. The longer they live, the more difficult the acquisition of such language will be; and the unfortunate victim of neglected education is doomed to talk slang for life.

TWO COLD LIQUIDS MAKE A HOT ONE. Mix four drachms of sulphuric acid, (oil of vitriol), with one drachm of cold water, suddenly, in a cup, and the mixture will be nearly half as hot again as boiling water.

What would be some of the consequences were the diurnal revolution of the earth to cease?

Do what you can to make others happy, and you will be pleased yourself.

Teachers' Institutes.

Sketch of the proceedings of a series of Teachers' Institutes, held in the state of Michigan, in the Spring of 1849.

In a Circular issued in October last, Mr. Mayhew, Superintendent of Public Instruction, proposed to hold a series of *Teachers' Institutes*, in different parts of the State, as should best accommodate the *whole State*; provided sufficient interest should be manifested in the subject, by citizens residing in eligible localities, to justify the undertaking.

In answer to this Circular, the Superintendent received communications from committees raised for that purpose, representing the favorable action that had been taken on the subject, by the citizens of several villages. Three localities were selected, and Institutes have been held as follows:

1. At Jonesville, Hillsdale Co., commencing Monday, the 19th of March, and continuing two weeks.

2. At Ann Arbor, Washtenaw Co., commencing Monday, the 2d of April, and continuing two weeks.

3. At Pontiac, Oakland Co., commencing Monday, the 19th of April, and continuing two weeks.

At each of these Institutes, a course of Scientific and Practical Lectures,—ninety in number, was given by a Board of Instruction of extensive and successful experience in Institutes. This series of Lectures included all the topics usually embraced in an extended course of Common School education. The theory and Practice of Teaching were not overlooked. Instructions in the higher departments of an English Education, were also embraced in the course, as will appear from the Catalogue to be published in a few weeks. An epitome on the topics discussed in the Lectures will be arranged in a tabular form in the Catalogue. The following gentlemen compose the

BOARD OF INSTRUCTION:

—Ira Mayhew, A. M., Principal and Lecturer on Astronomy, Geography and the Theory and Practice of Teaching.

—A. S. Welch, A. B., Lecturer on English Philology and Chemistry.

—Rev. S. C. Hickok, A. M.; Lecturer on Arithmetic, Penmanship and Vocal Music.

—L. M. Cutcheon, M. D., Lecturer on Anatomy Physiology and Hygiene.

The Lectures, where the subjects would permit, were illustrated by apparatus and appropriate experiments.

In addition to the above, lectures were delivered as follows:

At ANN ARBOR, by Rev. A. Ten Brook, A. M., a Lecture on Colleges in the West; by Rev. J. H. Agnew, A. M., a Lecture on the Dignity of a Teacher's Profession.

At PONTIAC, by H. C. Knight, A. M., a series of Lectures on Natural Philosophy, Ethnology and General History; by Rev. W. H. Woodward, A. M., a series of Lectures on Galvanic and Voltaic Electricity.

These Institutes have been favorably noticed by the Press, in the Counties where they have been held.

There were seventy Teachers in attendance at Jonesville, from eight different counties; one hundred

and fifteen at Ann Arbor, from fourteen different counties; and one hundred and twenty-eight at Pontiac, from ten different counties;—making three hundred and thirteen Teachers in attendance, at this Series of Institutes.

The Citizens of places where Institutes were held, to encourage a large attendance of Teachers, generously proposed to board gratuitously, any coming from abroad; and most nobly did they redeem their pledges. Too much praise cannot be awarded to the efficient Committees who volunteered their services in this enterprise. Some of them not only devoted their time for several days to this subject, but assumed heavy pecuniary responsibility in providing board at public houses. As might be expected, there were many Teachers in attendance who would not consent to tax so largely the hospitality of citizens, and insisted on paying their own board.

In consequence of this liberality of citizens, the necessary expense of Teachers in attendance, was reduced to the small sum of two dollars for the full course of instruction given at the Institutes. There is probably no other enterprise in which the same expenditure of money promises so great usefulness,—usefulness to teachers in attendance, not only, but to the communities that may subsequently enjoy their labors, as well as to the citizens and families where Institutes may be held. Especially is this true where the services of so competent a Board of Instruction are enjoyed as Mr. Mayhew had associated with them in the late series of Institutes.

* Citizens were in attendance, less or more, during the day session; and generally several hundred were in attendance at the evening sessions.

Old Epigrams.

TO A SPENDTHRIFT DISINHERITED.

His whole estate thy father, by his will,
Left to the poor—thou has good title still.

THE HAPPY PHYSIOGNOMY.

You ask why Rome diverts you with his jokes,
Yet, if he prints, is dull as other folks;
You wonder at it! This, sir, is the case—
The jest is lost unless you paint his face.

ON A MISER AT SPRING GARDEN.

Music has charms to soothe the savage breast,
To calm the tyrant and relieve th' oppressed;
But Vauxhall's concert's more attractive power,
Unlock'd Sir Richard's pocket at three-score;
O, strange effect of music's matchless force,
T' extract two shillings from a miser's purse!

ON A GENTLEMAN WHO EXPENDED HIS FORTUNE AT

HORSE-RACING.
John ran so long, and ran so fast,
No wonder he ran out at last;
He ran in debt; and then, to pay,
He distanc'd all, and ran away.

WRITTEN ON THE COLLAR OF A DOG, PRESENTED BY

MR. POPE TO THE PRINCE OF WALES.
I am his Highness' dog at Kew;
Pray tell me, sir, whose dog are you?

THE AGRICULTURIST.

For the Vermont Agriculturist.

Thoughts for the Young.

The Garden of Eden was undoubtedly, a place of surpassing loveliness. Its beautiful groves, its fragrant flowers, the melting richness of its fruits, its cool streams and limpid rivers, the choral strains of its feathered songsters, and the soft and balmy atmosphere, must all have conspired to render it a most delightful abode. We wonder that Adam and Eve could not have been contented, and let the forbidden fruit alone, so that we their posterity, could have had access to the Garden also.

But instead of mourning over the loss, we may as well look around us, and see whether there is not something yet left worth possessing. There is, after all, much that is lovely and beautiful in the earth, notwithstanding the dazzling glories of Eden have departed. The glowing beauties of the maiden have faded, but traces of that beauty still beam in the face of the matron. That man must have a morbid disposition, who can look out upon the face of the earth, on a bright morning in spring, when vegetation is bursting its fetters and unfolding its beauties, when the feathered tribe is filling the air with rich melody, and when the balmy fragrance of the atmosphere is courting into life the buds and blossoms of a thousand different plants, and discover no beauty, no loveliness. The mind endued with a right spirit will perceive much to admire, and will look through all these clustering beauties of nature up to nature's God, and discover his handy-work in the development of life, and all the various arrangements for the growth and maturity of the vegetable and animal world.

It is interesting to notice the perfect system and order that nature exhibits in all her works. She seems like a chemist in a vast laboratory, nicely weighing and measuring out various simple elements, and compounding them in such exact proportions, as to produce the most beautiful experiments in countless numbers. Man can only faintly imitate her, and wholly fails in the ability to give the life-inspiring principle, which fills the earth with joy and gladness.

But nature, or more properly nature's God, folds up this principle in the seed, where it may lay for a hundred or a thousand years, and then place it in circumstances to call it forth, and it will readily answer to the summons. In the hand of an Egyptian mummy, embalmed 3000 years ago, was found a small bulb. On being placed in the earth and exposed to moisture, it germinated, sent forth its leaves and produced a beautiful flower. The seed of other plants and grains have sometimes been found preserved under somewhat similar circumstances, which would readily germinate when placed in the ground. A chemical examination of seeds will show that they are composed principally of starch, which if kept dry, will undergo no change in any length of time; but if placed in the ground under circumstances favorable for germination, the starch disappears and is replaced by sugar and gum.

As illustrating the process of germination, take a bean, remove the outer covering and the two lobes will be perfectly insipid and amylaceous, while between them will be found a minute germ, the embryo of the future plant. Place it in the ground and soon the moisture will penetrate the outer covering, the lobes will swell and burst their envelope, the germ will send down a little radicle, and upward the imperfect form of leaves. If tasted now the lobe is no longer insipid, but sweet and mucilaginous, because the starch is changed into sugar and gum. At the same time, numerous vessels run through the lobes for the purpose, as is supposed, of conveying these principles, as generous nutriment to the newly-born plant, until it has acquired sufficient maturity to procure other support for its welfare from the air and the earth; and when this happens, the sugar and gum entirely disappears from the lobes; they decay and the plant is entirely dependent on the leaves and the root for its future support.

The silent and almost miraculous process of germination will only take place under certain conditions. In the first place darkness is essential, and plants will not sprout if exposed to constant light; and yet no sooner have the leaves appeared than light becomes absolutely essential to a healthy and vigorous growth. In the second place, a due temperature is essential, which must always exceed 32 degrees, and never exceed 100 degrees Fahrenheit. It also requires a liberal supply of moisture, and perfect access of air; and all these agents, light, heat, moisture, and air, must operate conjointly, or at the same time. Bury the seed deep in the earth, and so situated it will not germinate nor decay, but remove it near the surface, so as to be subjected to the influence of air, moisture and heat, and it will quickly start into life, and its emerging plumula or leaf, become verdant under the influence of the solar light. Seeds of the raspberry which have been buried 1600 years, 30 feet deep, have been known to germinate and grow.

How mysterious is the agency of light, at first serving to keep to keep the vital principle dormant, but when it has once burst into activity, becoming so essential to the growth and beauty of the plant. The power and goodness of God are magnificently displayed in this element. As we look out on the landscape, lighted up by the glorious orb of day, and relieved by the various shades of verdure; as the eye wanders over hill and valley, mountain and plain, streamlet and lake, or as we gaze with admiration on the blue vault above,—the summer clouds, or the stupendous arch of varied light which so frequently spans the heavens as the rainbow,—how can we refrain from bowing down with grateful adoration before the Being, who has, by the creation of this one simple element, contributed so wonderfully to the happiness of his creatures, and saved them from the horror of groping in perpetual darkness. And how excellently does the divine goodness and wisdom shine out, in constituting this light, of seven different colors, as it is exhibited in the rainbow, or separated by a prism. Different objects absorbing different rays, and reflecting others, produce an endless diversity of shades.

and we are charmed with the varied and gorgeous hues of creation.

"Look upon the rainbow and praise him that made it; very beautiful it is in the brightness thereof; it compasseth the heavens about with a glorious circle, and the hands of the Most High bended it."

AGRICULT.

GOOSEBERRIES. The Horticulturist has a good article on the gooseberry, translated from the French. In the moist climate of England success is a matter of course. In the dry climates of France and the United States, the great rule is to *keep the roots cool*.—For this purpose the writer recommends paving with brick or stone. Tan bark will answer the purpose; or a thick covering of leaves, three or four inches thick, or boards, less perfectly. A little salt would aid in the preservation of coolness and moisture.

The Horticulturist commences a new volume (the 4th) with the July number. It is admirably sustained. Edited by A. J. Downing, and published by Luther Tucker, Albany, at three dollars a year.

The Color of Houses.

The interior of a house should always be painted of a warm, neutral tint. Pure white is too cold and cheerless for a dwelling-room, and is, moreover, so liable to stains, that its appearance of purity and cleanliness, which is a great recommendation with neat housekeepers, very soon wears off.

The purity of our atmosphere, and the absence of coal smoke, admit of houses being painted a pure white; and where lead and oil are alone used in the open air, the color will grow whiter from exposure; but in the interior of a house it will become a dingy yellow, from being deprived of light and air. White lead improves by age, and should not be used for wood work unless at least a year old; linseed oil also becomes purer and better from age, and should be at least two years manufactured before used. Much harm results from the employment of incompetent workmen in the painting of houses, as from their inexperience in mixing paints, and their inability to distinguish between good and bad materials, the employer often throws away his money, and defaces the appearance of his house in the attempt to beautify it by a coat of paint.

In painting a house any light color, particular care should be taken to *kill* the knots in pine wood, as it is technically termed, or the effects of the first painting will be greatly marred. The best method of destroying the turpentine contained in pine knots is by spreading upon them freshly slacked lime, which will effectually burn it out. After this has been done, the knots must be covered with a sizing, composed of red and white lead and glue.

In painting the outside of a house, there should be no turpentine mixed with the paint, excepting in the case of white paint, and then only in the last coat; not more than one part turpentine to four parts oil should be used, as oil has a tendency to discolor white.

White lead forms the basis of all pigments for house paintings except black, which is generally composed of lampblack; but a new mineral substance has recently been discovered in New Jersey, which forms a beautiful jet black, and resists the action of the atmosphere and water better than any paint yet made. It has already been extensively used on ships, and will probably entirely displace every other kind of black paint before long. Not much black paint is ever used on houses, although it is extensively employed for fences and iron work; and as it is important to use a material that will resist the action of the atmosphere in ornamental iron work, which is so soon destroyed by rust, the discovery of this new mineral pigment is a matter of importance to builders. We have seen some specimens of this new paint, which were remarkable for brilliancy of color and hardness of surface. A steam mill has been erected for manufacturing this article, and we shall be able to give more definite information respecting it before we conclude our remarks upon this subject.

The colors and tints proper for house painting, such as browns, drabs, yellows, pea-green, grays, and imitations of stone color, are made by mixing, with white lead and linseed oil, the following colors, which should first be finely ground in oil:

Drabs—Chrome yellow, lampblack, and red; or Venetian red and burnt umber, with white.

Brown Stone color—Spanish brown, chrome yellow, and lampblack, with white.

Gray Stone—Lampblack and Venetian red, with white.

French Gray—Indian red, Chinese blue, and ivory black, with white.

Sage color—Raw umber, Prussian blue, and Venetian red, with white.

Slate color—Black and Venetian red, with white.

Dark Blue—Prussian blue with white.

Sky Blue—Ultramarine or Prussian blue, with white.

Violet—Vermilion, blue, and black, with white.

Lilac—Drop black, ultramarine, and crimson lake, or Indian red, with white.

Peach Blossom—Carmine and ultramarine, with white.

Rose color—Crimson lake and vermilion, with white.

Salmon color—Chrome yellow and Indian red or burnt sienna, with white.

Straw color—Yellow ochre and orange chrome, with white.

Buff color—Venetian red and yellow ochre, with white.

Pearl White—Ultramarine, crimson lake, and ivory black, with white.

French White—Indian red, ivory black, Chinese blue, or ultramarine, with white.

Fawn color—Yellow ochre and Spanish brown; or Venetian red, blue and umber, with white.

Pea Green—Yellow and blue; or chrome green, with white.

Green—Prussian blue and chrome yellow.

Olive Green—Chrome yellow and black; or raw umber and black.

Bronze Green—Black and green; or chrome yellow and black.

Orange—Chrome yellow and vermilion.

Chocolate—Spanish brown and black; or Venetian red and black.

There are various other modes of producing the above shades, but simplicity and economy are the objects we have in view. The gradation of shades produced by a varied portion of these colors is almost indefinite.

Small quantities of the coloring matter should first be added to the lead, and continued till the right shade is procured. Enough should be mixed at one time to cover all the woodwork required with one coat.—*Ranlett's Architect.*

Utility of Select Seeds.

We hear much at this day of certain productions depreciating, or as the phrase is "running out." This, however, would never be the case, were we to adopt the philosophy and practice in reference to them which nature so obviously teaches to every reflecting and observing mind, and which may be condensed into a maxim of most convenient brevity, viz.: Propagate only from the best. There can be no question, we apprehend, that the grain that ripens earliest is the most eligible for seed, for the very good reason that circumstances show it to be the most mature. It is asserted in the Albany Cultivator, that a farmer at the North a few years since, was accustomed to dispose annually of large quantities of seed wheat and at prices unusually and even extravagantly high, as his wheat was of a very superior quality—remarkably heavy and productive, and by many supposed to be a new variety. It appeared, however, upon investigation, that he had succeeded in bringing it to that exalted degree of perfection which rendered it the wonder and admiration of all, simply by following the above practice, by reserving annually the best and most perfectly developed portion of his crop for seed. Many of the very excellent and highly productive varieties of corn now cultivated in New England, have attained their present excellence simply through the same practice, as have many other productions, such as peas, beans, cucumbers, pumpkins, squashes, and indeed most of the above-ground vegetables and esculenta that grow in a northern soil.

We think farmers cannot accord too much attention to this subject. It is confessedly one of primary importance, especially to those who cultivate for our city markets, where every production commands a price precisely in the ratio of its excellence.—*SEL.*

THE BEST METHOD OF RAISING PEAR SEEDLINGS.

Mr. Robert Nelson, an experienced gardener in Newburyport, has been very successful in raising pear seedlings, by adopting the method of sowing his seeds in the Fall, as soon as gathered, in a garden bed, distributing them pretty thickly. The plants easily come up in the spring, and as soon as they get four leaves, he takes them up, cuts off the tap root, and transplants them into beds or nursery rows of good soil, where the young plants will make lateral roots, and start nicely. In cutting off the tap root he takes about a dozen plants in his hand, and cuts off the

roots at once at half length. By thus increasing the number of mouth or feeders of the plants they will grow excellently well. The branching roots which have the whole summer before them, will be sufficiently strong to stand the winter, even without protection, and in the next summer, the second, they will be fit for budding.

TO DESTROY THE APHIS ON ROSE TAKES OUT OF DOORS. In the "Ladies' Companion to the Flower Garden," under the article of Aphis, Mrs. Loudon advises to make a decoction of quassia, in the proportion of an ounce of chip to a pint of water, and dip the infested branches of roses into it. This cannot be done on a large scale, but I have found the use of the decoction so valuable that it ought to be more generally known. My mode of using it is as follows:—

Having made in the outset a small quantity in the above proportions, and tested it as a guide for my future use, I now make from two to three gallons at a time in a large iron boiler. When cold, on a fine day throw it on your rose bushes by means of a garden syringe, taking care to wet the under as well as the upper surface of the leaves. In two days' time you will see thousands of the insects adhering to the leaves, but quite dead. Then syringe the bushes with plain water, using considerable force, to wash off the dead aphides. You will no doubt observe many still living, as it is almost impossible to wet them at one operation. Repeat the syringing with the decoction, and afterwards with the water.—*The Rose Garden, by Wm. Paul.*

Mr. Editor. Dear Sir,—The above decoction we have made use of at the rate of four ounces to five quarts of water, with great success—and hope many of your readers that wish to preserve their roses from destruction, will not fail to make use of so cheap and easy a remedy. C.

Horticultural Seed Store, Boston, June 1st, 1849.

CUTTING AND THRESHING WHEAT. The appearance or condition, indicating the proper time for cutting wheat, depends on the variety. Thus, when the grain of red wheat can be squeezed between the thumb and finger, without any moisture being forced from it, cutting may always be safely commenced; for it is never better than when harvested in this state, and if cut later, the wheat is seldom so good in quality; besides, serious losses are sometimes sustained, in consequence of high winds, when it is allowed to arrive at a riper state. The white varieties should stand somewhat longer than the red before they are cut.

With respect to the color of the straw as a sign of maturity, experience has shown, that if in a healthy state, the ear generally ripens before the straw; the yellowness of the chaff and upper parts of the straw, indicates that the crop is fit to cut; and the uniform yellow color of the straw shows that the crop has arrived at maturity, and, if suffered to stand in the field, the kernels are liable to be shaken out by the wind.—*Agriculturist.*

From the Semi-Weekly Eagle.

The Improvement of Sheep.

The farmers in this County, with few exceptions, would find it for their interest to keep their sheep better, both in Summer and Winter. The more common price for summering those that have lambs is two shillings. If they should pay three, and put into the same pastures from one quarter to one third less sheep, the lambs would be at least a quarter and frequently a third larger in the fall. They will be better prepared to withstand the severities of winter, and will in the end make larger and better woolled sheep. Such lambs will cut at least a pound of wool a head more than those that have been poorly kept. There is no young animal that will thrive faster than the lamb that has feed and milk enough. It is not unfrequently the case that the Coselet is as heavy again at a year old, and shears twice as much wool as the other lambs in the same flock. The sheep in this country generally average from 2½ lbs. to 4½ lbs. per head, when the Coselets from the same flocks average from 3 to 6; this difference is entirely owing to the keeping. Those sheep that are kept in small flocks and run in large pastures grow much larger and generally shear more. They are consequently worth more both for mutton and wool. A variety of herbage is necessary for the growth of the sheep. This can only be obtained by a large range of pasture. The sheep is more nice and particular about its food than most other animals. When sheep are fed with corn in troughs, if there should happen to be a speck of dirt in one corner they will leave all the corn near it. Old sheep that are healthy and in good order in the fall, will not need any grain in the winter if they have a plenty of good hay; if the hay is not good they ought to be fed with grain every day. In the spring the Ewes should be fed with grain two or three weeks before they lamb. The sheep will have more milk and the lambs be stronger. The lambs should be fed some oats in the trough late in the fall and learned to eat them before they come to the barn, and they should then be fed with them until they have learned to eat hay, which will generally be in two or three weeks. Then if the hay is good they will not need any more. I believe that one peck of oats fed in the fall to lambs is worth a bushel in the spring. Over stocking pastures with sheep will in a very few years injure them. Feeding mowings late in the fall and early in spring will soon spoil them for hay. If the farmer keeps his sheep poor in winter he will certainly lose many of them in spring, and if he raises any lambs it will cost nearly as much as they are worth to take care of them. If the sheep are strong and healthy the lambs will be so, and they will take care of themselves.

Selecting. The owner of sheep should go through his flock at shearing time and mark all his thin and short woolled sheep, whether coarse or fine, and turn them into a good pasture by themselves, and as soon as they get fat sell them to the butcher. There are no flocks in this country so good that no poor sheep can be found among them. There is but very few where a man that is a good judge of sheep, would not

find some that are at least medium quality; and if these sheep be put to first rate buck the stock will be good. I have found that my flock of sheep, all kept alike varied in the weight of their fleeces a pound of wool per head. I think if others would take the trouble to weigh every fleece separately as I have done, they would find that they would vary more than mine did. Thin woolled sheep will not endure our cold winters. All the coarse sheep should also be sold, as they do not yield so much profit to the owner as those that are finer. If after selling all the poor sheep he finds his flock too much reduced, he can purchase a few of the very best that he can find, and they will soon increase so as to become a large flock. If the farmer selects his sheep with care and judgment, always breeds from a first rate buck and keeps them well, he will realize a good profit from them, notwithstanding the low prices of wool. A SHEPHERD.

Windham Co., Vt., May 30, 1849.

English Mode of Making Butter.

The following is the mode in which the best butter in England is obtained. If you consider it worth a place in your journal, it is at your service.

CHARLES WILLS, *Veterinary Surgeon.*

Veterinary Institution, New York, May 10, 1849.

The best land for grazing is old pasture, as free from weeds as possible, with abundance of good water. The cows should never be fast driven, heated, nor tormented in any way. They should be housed at night, fed on green food, and the pasturage changed when practicable. When going to milk, take salt-petre in the pail, one-eighth of an ounce to every eight quarts of milk.

The dairy should be kept clean and airy, and as near the temperature of 50° F. as possible, with very little light, and completely shaded from the sun in summer, by trees or otherwise. Strain the milk into coolers, sweet and dry, (never mix warm and cold milk), keep it from two to four days, then put the whole of the milk and cream into a clean churn, which is not to be used for any other purpose but the one intended. Boiling water is to be added to raise the temperature to 70°. Care should be taken not to continue churning beyond what is absolutely necessary.

After churning, put the butter into two bowls or pans of pickle, made from pure water and fine rock salt, dried in a stove or by the fire, as common salt, obtained from springs, or the ocean, gives the butter a bad flavor. It should then be well washed, and the pickle changed frequently, until all the milk is extracted, working with the hand the two parcels alternately, until the grain becomes quite close and firm, when it is to be cured with the finest rock salt and sugar, in the proportion of one ounce of refined sugar to a pound of salt, to be well worked into the butter with the hand, until all the pickle is driven out. The butter should be finished the day, it is churned, and then packed as closely as possible into a cask, if it is not intended for immediate use, which should be well seasoned, for some days previous, with strong

pickle, frequently changed. The caak should be strong and air-tight, and if not filled at one churning the butter should be covered with pickle until the next; but no caak should contain more than one week's churning. If the butter should, at any time, appear pale in color after the churning has commenced, a little grated carrot juice may be added, which will not injure either the butter or milk.—*Am. Agriculturist*.

From the New England Farmer.

On "Large and Small Potatoes for Seed."

MR. EDITOR: Your correspondent, "Down East," hopes definite experiments will be made." He asks to close, "will the extra produce of large potatoes be enough more to pay for the difference in the seed?" The editor justly notices "a very important subject, which is the general effect on the crop, as to improvement or degeneracy." With this expressed solicitude in view, permit me to say, that I have made "definite" and accurate experiments, as I hope others will do, and report, not from estimation and recollection, but from weight, and measure of seed and soil, as a matter of record, both at planting and harvest. From such documents, made year after year, and also respecting renewing from the hills, I can give the items if called for in future; from the results of which, I will now offer some of my convictions.

1. Large potatoes give more vigorous shoots: both top and root are in advance of small ones, and continue decidedly so; hence, for early table use, are much to be preferred.

2. By planting them whole they are crowded, and, unless the soil is very light, they cannot expand; and if not rich, the feeble shoots, from the stem ends especially, will, for want of nourishment and room, produce small ones.

3. Cutting them in halves gives more room, but weak shoots with strong ones, (like a titman pig in a litter) must take what they can get, which is not always enough; of course, inequality in size.

4. Cut from a large potato the largest eyes, and plant three or four in a hill, and we get more from the same weight of seed than in any other way, of large and equal sized tubers; but not as early as when the two ends are cut off, leaving the body to nourish three or four central eyes.

5. There is a difference between a potato small because it was from a feeble shoot, and one small from want of room and time to grow. The latter may do well for seed, but, having nearly as many eyes as a large one, but less vigorous, requires a light soil, that is well pulverized, to expand in, and rich, to furnish nourishment for so many shoots. The hills may be near, but should have only one in each, and delicate culture.

6. By cutting off from one third to one half of the stem end (the best to eat) we have the finest eyes to plant in the other end, which may be cut again, if large, and give a crop nearly equal to the whole.—This is economy and no deterioration.

7. By carefully selecting, in the field, at harvest, for seed, hills in which all are large and fair, we are

sure of improving our crop, both in quantity and quality. And as surely will the crop degenerate if we use and sell the best, and plant the refuse.

8. When seed is dear, and likely to continue so, it is still more desirable to be particular and plant seed that will return the most and the best.

Yours truly,

BENJAMIN WILLARD

Wilbraham, May, 31, 1849.

From the Ploughman.

On Breaking Steers.

MR. EDITOR,—Dear Sir: Your paper I have always considered a valuable source of instruction in matters relating to agriculture, but an article on "breaking steers," which appeared last week, I believe editorial, was, in my opinion, somewhat heterodox, and consequently calculated to mislead. This is my only apology for troubling you with a few lines, the result of my own experience. The old practice of first learning steers to draw, is altogether wrong. I have known people to yoke their steers, and put on one strong pair of Oxen behind, and another pair before them, and then go to work—the steers soon learned to draw, but as soon as the forward pair is taken off the steers are entirely unmanageable, and will continue so for months—indeed they never will *haw* and *gee* until you put them on the lead—you may as well learn a child to walk by always putting him between two full grown persons, and never giving him an opportunity to learn to balance himself.

An active pair of steers may be learnt to lead a team without any trouble in *one half day*. Take them, when first yoked, into a small yard, and with a short whip, *stick close to them* on the near side, and when they come to a corner, *haw* them round, and so continue to do until they, *voluntarily*, keep close to you, which will generally take from one to two hours; then put them forward of the *old oxen* and go to work; but be particularly careful for the first day or two, to keep so near the steers that you can reach them with your whip and prevent them from forming the wicked habit of *geeing off*. By pursuing this course your steers soon become docile and you may use them alone or with other cattle as you please. Great care should be taken not to overload them at first. By good keeping and kind treatment they soon become ambitious, yet docile, and will exert their full power when occasion requires. The old adage that "Steers soon learn *gee* and go" but "*haw* and *whoa*" are more difficult lessons, is altogether false. *Haw* and *whoa* are very easily taught to any active young animals, but *gee* is the more arduous lesson which should not be attempted until the others are learned to perfection.

Yours respectfully,

A DRIVER.

MUTTON. But the farmers of New England, who can readily adapt themselves to circumstances, will find the raising of fat mutton and ordinary wool more profitable than fine wool. The numerous large cities, and the thousands of flourishing towns and villages, that are rapidly increasing or suddenly starting into existence, from the enterprise in the three great

branches of industry, agriculture, manufactures and commerce, will create a great demand for fine mutton. especially when people learn its superiority to other meats now used to a greater extent; and the numerous railroad and steamboat communications, and the use of ice, will afford advantages for bringing fresh lamb or mutton from every hill and dale in New England, or the animals may be transported to market, with economy, and without injury from the journey. There will be a gradual change. The west will produce fine wool, and the east fine mutton.—*N. E. Farmer.*

A Mix of Grasses.

Our farmers are now laying down much of their ground to grasses. Clover and herds-grass are, nine times in ten, the kinds and the only kinds sowed, whether for mowing or pasturage. We have ever contended against this mode of being confined to only these two species of grass and have always advocated mixing together more varieties. It ought to be done in either case, whether you wish to confine your land to mowing for the hay only, or where you wish to turn it out to pasture. Each separate species of grass or plant, used for forage, has some peculiar property or ingredient which is valuable in producing certain qualities in the beef, or milk, or butter or cheese which is manufactured from it. The white clover, for instance, is said to produce more caseine, or cheesy matter, in the milk of those cows that feed upon it than most other grasses. Some grasses give peculiar flavor to the butter and others give out a pleasant fragrance to the hay, which is communicated more or less to the milk. The red-top and the orchard grass should be mingled in with herds-grass and red and white clover. There is another grass which is not very abundant with us, which should be more cultivated as an ingredient of our pastures and mowing fields. It is called the *sweet scented vernal grass*. It is what botanists call the *Anthoxanthum Odoratum*. It is a native of Europe and was introduced into this country, and has become more or less scattered about among our grasses. It is very fragrant, and when a little of it is cut gives a delightful flavor to the new mown hay. It is an early grass. A writer some years since in the *Farmer's Cabinet*, speaking of the prevalence of this grass about Philadelphia, says, its scent somewhat resembles vanilla. It grows from a foot to 18 inches high. Its stem is very small and round, with a few long and slender leaves. Its odor, said he, is sufficient to distinguish it from other grasses found in our pastures. When in blossom the air is often highly charged with its scent. As we have before said, it is an early grass, and of course ripens before other grasses, so that it will require but a small portion to be sown for the earlier supply of pasturage, while others will come on in succession. It accommodates itself very well to different soils.

It is found that butter made from cows which graze upon pastures in which this grass grows, has, in the earlier part of the season a peculiarly pleasant flavor, and when this grass declines, the flavor declines.—The grass, however, comes on again in the fall, and

it makes valuable fall feed, or "aftermath," as it is sometimes called.

A chemical examination of this species shows that it is not so highly nutritious as some of the other species. Its fragrant properties consist in its containing *benzoic acid*, a substance which is well known to possess a peculiarly aromatic odor. It is stated that an essential oil can be distilled from the grass, which will afford a pleasant perfume.

It is not strange, therefore that the butter should contain a portion of it, and partake of its fragrant qualities. We know that milk will contain the odoriferous particles derived from turnips, onions, garlic, &c. &c. Hence it is an object to the farmer to take advantage of the knowledge of such facts and mix his grasses in such a way that he shall not only obtain a supply of the nutritious matter which the several species may contain, but also any other materials which will render the products of beef, butter, and cheese more grateful in quality, and consequently more saleable and profitable. This can be easily done by mixing the seeds of different grasses, when sowing. We presume all the varieties of seed required for the above purposes may be obtained at the several seed stores in Boston, New York and other large places.—*Farmer.*

A FEW KINDS AND THE RIGHT ONES. Mr. Rivers, of Sawbridgeworth, England, has nearly 1000 kinds of pears on his grounds; but for market fruit he cultivates only four. Of these he has, on pear stocks, 500 of the *Bartlett*, and 2500 of the *Beurré Capiaumont*,—and on quince stocks, 500 of the *Beurré d'Amanlis*, and 2500 of the *Louise Bon de Jersey*. His experience, he remarks, has been bought by a large portion of his life, having wasted years on kinds not so well adapted to his soil or to the market. The profit from these trees is now very great. They are all September and October pears; for, he says, "the million seem to buy pears freely in the Autumn only,"—and besides, being a nurseryman, he thus has his money for his fruit before his autumn tree business begins.

Such experience should be regarded by all who intend to raise fruit for market. Too few kinds can hardly be cultivated; and those few should be selected with reference to the soil on the one hand and the market on the other.

The article on Pears by Mr. Rivers, in the *Horticulturist* for June will be read with eagerness by all cultivators.

BUCKWHEAT WITHOUT GRIT. Did any person who who eats buckwheat cakes, ever have the good fortune to get any containing not a particle of grit? A method not generally known, was lately stated to us by a practical farmer, who says that buckwheat raised in this way is entirely free from the difficulty.

The buckwheat is sown at the usual time; but before harrowing, a bushel of rye is sown with it to the acre: they both come up together, and the buckwheat being much the most rapid in growth, soon obtains the ascendancy, the rye only forming a smooth, green

carpet beneath, which completely prevents the dashing of the grit of the soil by rain upon the buckwheat, when it is cut, and otherwise keeps it clean. After the buckwheat is removed the rye obtains sufficient growth before winter, and the next season affords a good crop of itself. Thus the buckwheat is protected and two crops obtained from a single seeding.—*Pennsylvania Cultivator.*

Order of Farms.

The following rules, maxims, &c., were adopted on the farm of J. Delafeld, N. Y.

"Every person employed on the farm," says the Albany Cultivator, "is furnished with a printed card, comprising these rules and regulations."

It is expected that all persons employed on the Oakland Farm will carefully attend to the following system:

Regularity in hours.

Punctuality in cleaning and putting away implements.

Humanity to all the animals.

Neatness and cleanliness in personal appearance.

Decency in deportment and conversation.

Implicit obedience to the proprietor and foreman.

Ambition to learn and excel in farming.

MAXIMS OF ORDER AND NEATNESS.

1. Perform every operation in proper season.
2. Perform every operation in the best manner.
3. Complete every part of an operation as you proceed.
4. Finish one job before you begin another.
5. Leave your work and tools in an orderly manner.
6. Clean every tool when you leave off work.
7. Return every tool and implement to its place at night.

The following is a part of a table, published in the Salem Gazette, showing the aggregate value with compound interest, of certain small sums, which deserves the attention of every young man. He need not be told what indulgences he can dispense with.

The expenditure of 2½ cents a day, or \$10 a year, is \$360 in 20 years, and \$2,900 in 50 years.

The expenditure of 5½ cents a day, or \$20 a year, is \$790 in 20 years, and \$5,800 in 50 years.

The expenditure of 11 cents a day, or \$40 a year, is \$1446 in 20 years, and \$11,660 in 50 years.

The expenditure of 27½ cents a day, or \$100 a year, is \$3600 in 20 years, and 29,000 in 50 years.

CLOTHES LINES are made of gutta percha, which have been exposed constantly to sun and rain, heat and cold, for two years, without any perceptible deterioration.

CINCINNATI FAIR. The Agricultural Fair to be held at Cincinnati on the 5th, 6th, and 7th days of September next, is intended to be a splendid one.—Three buildings, each 150 feet by 55, are to be erected for the exhibition of articles.

CHANGE OF OPINION. He that never changed any of his opinions, never corrected any of his mistakes; and he who was never wise enough to find out any mistakes in himself, will not be charitable enough to excuse what he reckons mistakes in others.—*Dr. Whicote.*

The Markets.

BRIGHTON MARKET, June 25 and 26.

At market, 200 Beef Cattle, 500 Sheep and Lambs and 23 Swine.

Prices.—Beef Cattle.—Extra, \$6 75; first quality, 6 60; second, 6 00; third, 5 75 a 6 00.

Sheep and Lambs.—Sales at \$1 90, 1 75, 2 62.

On Thursday, at market, 1000 Beef Cattle, 9 pairs Working Oxen, 28 Cows and Calves, 2000 Sheep and Lambs, and 400 Swine.

Prices.—Beef Cattle.—Extra, \$6 50; first quality, 6 00; second, 5 75; third, 5 00.

Working Oxen, \$75, 90.

Cows and Calves—\$16, 21, 25, 30, 39.

Sheep and Lambs—\$1 50, 2 00, 2 62, 3 25.

Swine—Small Pigs, 7 a 7½c; Shoats, 5 a 6. At retail, 6 a 8; Still Hogs, 4½.—*Cultivator.*

BOSTON, JUNE 28. WOOL.—Fleece Wool of the new clip is beginning to come to market. A few small lots, which were received during the past week, were taken by manufacturers, at prices a little below our former quotations.—The low prices and dull sales of Woollen manufactured goods of every description, prevent the expectation that high prices can be realized for Wool the coming season. It was believed that the growers generally, aware of the true state of the market, would have been willing to meet the case, by selling at a price which would afford the manufacturer a small profit. This could have been done, and still the wool-growing business would have been a profitable one. Many large owners of sheep had taken this view of the matter, and would have found their true interest in the long run, by selling at about last year's prices. But a Circular issued by a Boston Commission House, engaged in selling manufactured goods, and desirous of extending their business by uniting with it the sale of Wool, has been extensively distributed at the West. By setting forth their peculiar advantages for obtaining a high price for Wool, and advising the payment of three to four cents per pound over last year's prices, they have excited the expectations of holders. The immediate effect has been to disturb the Western Wool market as regards prices. The final result will not be known for some months. Pulled Wool is still dull. Small sales have been made, without much variation from former prices.

Prime Saxony Fleeces, wash'd lb.	40	a	42		
American full blood	do	36	a	38	
do 3-4	do	33	a	35	
do 1-2	do	30	a	32	
do 1-4 and com.	do	26	a	28	
Extra North'n pulled lamb	do	36	a	38	
Super	do	do	31	a	33
No. 1,	do	do	28	a	30
No. 2,	do	do	21	a	23
No. 3,	do	do	15	a	16
Smyrnia washed	do	16	a	22	
do unwashed	do	8	a	16	
Bengasi unwashed	do	7	a	9	
Buenos Ayres	do	8	a	20	

—*Courier.*

PANEUIL HALL MARKET.

WHOLESALE.				Eggs, doz.			
Beef, fresh, lb.	7	a	14	Apples, barrel,	5	00	0 13
Mutton, 1st qual.	6	a	12	Beans, bush.,	1	50	a 1 75
2d "	4	a	8	Peas, bushel,	0	00	a 0 00
Lamb, lb.	10	a	12	Potatoes, barrel,	0	00	a 0 00
Veal, lb.	3	a	8	Onions, bush.,	0	00	a 2 00
Pigs, roasting,	1	00	a 1 25	Honey in comb,	10	a	20
Chickens, pair,	75	a	1 00	SEED.—RETAIL.			
Turkeys, a piece,	1	00	a 1 20	Clover, North, lb.	13	a	14
Geese, mongrel,	1	25	a 1 50	Southern,	8	a	9
Pigeons, dozen,	1	00	a 1 25	White Dutch,	20	a	25
Pork, per 100 lbs.	6	00	a 6 75	Lucerne, or French,	33		33
Lard, best, pr. bb'l.	7	00	a 7 50	Herdsgrass, bush.	3	25	a 3 50
Western, keg,	7	50	a 8 00	Red Top, bushel,	1	20	
Butter, lump, lb.	14	a	20	Northern,	1	25	a 0 00
do. skrin,	12	a	15	Southern,	65	a	83
Cheese, new milk,	7	a	8	Orchard Grass,	—	a	2 00
do. four milk,	5	a	6	Fowl Meadow,	2	50	a 0 00

Cheap and Valuable Paint.

EDITORS CULTIVATOR.—The Ohio mineral paint has been offered to the public as something very valuable, particularly to the farmer, for its durability and cheapness. I send you below, the detail of some experiments which I caused to be made a year or more since, for cheap paint. I believe it equal to the Ohio article in all particulars, and superior from its *greater cheapness*, it being within the reach of all.

EXPERIMENT No. 1, was the mixing of water-cement with oil to the consistency of paint, and putting it on immediately. Any drying article used with oil paint, may be put in, if it be desirable to have it dry at once.

No. 2. Cement mixed with coal-tar, or gas-tar, as it is sometimes called, I put in, in the same manner, without any drying mixture. You can vary the color by the addition of any mineral substance. The paint I have put on, is now as hard as stone, and was put upon rough boards that had been exposed to the weather for ten years. I have just had painted a small building of rough boards battened sides and roof. The roof is covered with No. 2—the sides with No. 1. The color of both is stone. No. 1, nearly that of freestone, with a shade of handsome drab, and gradually becomes a little lighter. No. 2 is considerably darker, but this too becomes lighter by exposure to the air. I intend giving to the body of the building another coat, when sharp clean sand will be thrown against it, and I doubt not, but I shall obtain a rich imitation of freestone.

The water cement used was from Southington, Ct., known as "Moore's Cement."

It is not, like the Ohio paint, patented.

CHARLES R. ALSOP.

Middletown, Ct., April 27, 1849.

THE WAY DOMESTIC ANIMALS COLLECT THEIR FOOD. The horse, when feeding on natural herbage, grasps the blades with his lips, by which it is conducted between the incisors, or front teeth. These he employs for the double purpose of holding and detaching the grass, the latter action being assisted by a twitch of the head. The ox uses the tongue to collect his food. That organ being so directed as to encircle a small bundle of grass, which is placed by it between the incisor teeth, and an elastic pad opposite to them in the upper jaw—between these the herbage is pressed and partly cut, its complete severance being effected by tearing. The sheep gathers his food in a similar manner as the horse, but is enabled to bring his cutting teeth much nearer to the roots of the plants, in consequence of the upper lip being partially cleft. For his upper lip is thin, and is susceptible of considerable mobility; while that of the ox is thick, hairless, with a very limited action.

LIFE OF THE HUSBANDMAN IN HINDOSTAN. The husbandman rises with the earliest dawn, washes and says a prayer, then sets out with his cattle to a distant field. After an hour or two, he eats some remnants of his yesterday's fare for breakfast, and goes on with his labor till noon, when his wife brings out

his hot dinner; he eats it by a brook or under a tree, talks and sleeps till two o'clock while his cattle also feed and repose. From two till sunset he labors again; then drives his cattle home, feeds them, bathes, eats some supper, smokes and spends the rest of the evening in amusement with his wife and children, or his neighbors.

The women fetch water, grind the corn, cook, and do the household work, besides spinning and such occupations.—*Elphinstone's Hist. of India.*

Domestic Economy.

NEW MODE OF WASHING. A Mr. Tibbets advertises in the Mobile papers, that he has made a discovery of a chemical nature, by which a large washing of clothes—say five hundred pieces—may be done by one person in twenty-five minutes, without machine, or any rubbing, and without any injury to the clothes.

The Editor of the *Register* says, that the experiment was tested at the American hotel in that city, in the presence of a number of persons, and with the most complete success; and adds, that a knowledge of the ingredients employed in preparing the water enables him to say that their use can work not the slightest injury to the clothing.

WASHING CLOTHES.

We publish to day, for the benefit of the ladies, the greatest recipe for washing clothes ever yet published. By this process one hand can do as much as three hands in the old method, and do it much better. Be sure to keep this recipe. If you file our paper, mark round the recipe with pen and ink; if not, cut out the recipe and file it away.

RECIPES. Take good home-made soft soap, 4 lbs.; borax refined 4 oz.; common salt, 3 oz.; water seven pints. Boil slowly to cake soap; separate the top from the sediment for the cake soap. The bottom or sediment will do for washing dishes and such like.

PROCESS. 1. Wet the clothes thoroughly. 2. Rub the dirty and greasy spots with some of the soap. 3. Boil the clothes in strong soap suds of the above soap. 4. Rinse the clothes three times well in clean water.—*Exchange paper.*

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by BISHOP & TRACY, and sent to subscribers on the following

TERMS:

For a single copy,	- - - - -	50 cents.
5 copies, sent to one address,	- - - - -	2 00
10 " " " " " "	- - - - -	3 00
16 " " " " " "	- - - - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

SCHOOL JOURNAL

AND VERMONT AGRICULTURIST.

Vol. III.

WINDSOR, VT., AUGUST, 1849.

No. 4.

THE SCHOOL JOURNAL.

For the School Journal.
Parents and Teachers.

Messrs. EDITORS:—Having been engaged in the business of teaching for some three or four years, I have, as a matter of course, experienced *some* of the joys and sorrows attending the life of the School Teacher. I say sorrows; for how often have those who were so bitterly opposed to the late Act of the Legislature relative to common schools, vented their rage upon the innocent school teacher. And in *some* instances even, because the teacher was in favor of said Act, parents and others have maliciously sought to injure him, entirely disarranging his school. This it is true, is but an item of the trials that the teacher endures.

But amid all this opposition may we not well rejoice at the noble step which our State is taking in regard to education? She begins to regard the education of her children, as a subject paramount to all others. And although she may meet with opposition, and be thwarted in her noble schemes, yet she will "fear no evil"—she will ultimately triumph. There is evidently a great and momentous change going on in the public mind. Many of those who so zealously opposed the School Law, are compelled to admit, by the good already effected, that this great effort to promote popular education, does not prove so fruitless as they had anticipated. Prejudice, the offspring of ignorance, which has so long impeded the progress of education, is fast disappearing. And many who have formerly considered education of trivial importance, now begin to regard it in its proper light.

But while we exult over these happy changes there seems to be a great want of a hearty co-operation on the part of parents, with teachers; and until this be secured our schools must fail of affording that amount of good which they ought. There should be a mutual respect, a oneness of feeling in the teacher and parent. Each should study the other's benefit. And while the teacher may be a subject of watchful scrutiny, he should at the same time be considered worthy of Christian charity; and not be tortured and afflicted by that unbridled *captiousness* which so often displays itself. For an act of the teacher, trivial in its nature, is oftentimes transformed into an offence of the greatest magnitude. A word spoken disparagingly of the

teacher by a parent in the presence of his children, not unfrequently serves to excite in them a spirit of insubordination, and this same spirit running from heart to heart, the entire school soon becomes a band of insurgents. Parents, whenever they speak of the teacher or his school in the presence of their children, should always remember to speak *advisedly*.

The complaint is often brought against the teacher "that he fails in preserving proper order in school." And it is true that teachers are more or less deficient in this respect. But should it be expected that the teacher will preserve *good order*, so long as parental discipline is so much neglected? I am not sure that we teachers, in general, are much more deficient in regard to order than parents themselves: at all events we would not hesitate in giving the assurance that, did parents inure their children to a more rigid system of discipline, and teach them to regard parental authority as they ought, the appearance and character of our schools generally would be materially improved.

I will only add an expression of my anxious hope that my fellow teachers may be prospered in the noble work in which they are engaged, ever encouraged onward to the performance of every duty, not with the desire alone of acquiring a few dollars in gold or silver, but with a high ambition to aid in advancing the cause of education, remembering that the School Teacher, since he *has* acted so conspicuous a part in rendering our country what it is, may yet add to the strength and glory of our great Republic.

W. W. W.

Grafton, July 24th, 1849.

Connecticut School Law.

At a recent session of the Legislature of Connecticut an Act was passed providing for the establishment of a Normal School for the education of Teachers of Common Schools. The pupils are to be selected from all the towns in the state, and are to be persons who are already "possessed of the qualifications required of teachers of Common Schools" in Connecticut; and they are to be admitted to all the privileges of the School gratuitously. The Principal of the school is to be State Superintendent.

The state pays all expenses except for building and fixtures, which will be otherwise provided for.

For the School Journal.

Our Schools,—the Responsibility.

I have noticed in most communications a desire to cast the entire responsibility upon the teacher. Glad would I be if the whole task of reforming our schools, and of making them just what they should be, came within the province of the teacher; for the young mind is ductile, and very susceptible, and the reform might be soon accomplished. But the evil is one over which he has no absolute control. It is the old mind that is to be influenced in this reform. Established customs are to be changed, and a certain hereditary inattention and inactivity must be overcome. These, if properly considered, are no ordinary obstacles, and such as the teacher cannot well contend with. His influence may effect much; but they must be reached through other channels. Who dissents from this opinion, let him teach a school where the committee, having engaged a teacher at the lowest pay possible, leave the rest, as though their work was completed, to him; and he is consequently obliged to dun the little urchins for board and fuel; and at best finds them provided both unseasonably and unwillingly. There is paucity of books, although not of varieties and classes.

Be not surprised at the chequered look of his journal, and the number of tardy marks. Each benevolent individual furnishes his quota of advice, and perhaps commands, with regard to school government, while nothing is said concerning the improvement of the pupils in their studies, they thinking *that* of less importance, than a child's being punished for an offence which it never would have committed but for the influence of a parent. Then the cold neglect of many furnishes proof of a want of interest. I say let him teach this school, and he will, I think, be willing to concede that even a good teacher cannot alone make a good school. It is to be hoped that those whose influence is potent will exert it to make teachers what they should be, and to give them a favorable field for displaying their powers.

Brownington, Vt., July 4, 1849.

A. C. H.

But, O Teacher, art thou not a man—a woman? Are not those perverse adults that are complained of, also men and women? Dost thou suppose thy work done, in such a place, by merely taking care of the children at school? Suppose that be all that they pay thee for, is it not in the heart of a true man, of a true woman, to act the missionary? If the district is a half-civilized one so far as the school is concerned, see that thou leave it not in such darkness and wildness. There are some hearts that thou canst gain—some ears that will listen. Surely a father and a mother must be approachable, when thou goest with a meek, quiet and earnest spirit, to talk with them about their children. How does the missionary among the heathen manage to gather his schools and make them the agents of civilization? After all, the children and parents you have to do with are not heathens. Pray, Teacher, be strong of heart; have faith in the power of persevering love and labor; and content not thyself with leaving the school and the

district as well as before. Make both better; and let not any of the sad complaints of A. C. H. be an opiate to thy conscience. Ends.

Graham's English Synonymes.

This is the first work on English Synonymes ever prepared for the use of schools; and it is a blessing to be thankful for, that it is as good as if a score or two had preceded it. It is no compilation or abridgement, but an original work, giving evidence on every page of the hand of an accurate and tasteful scholar. The American edition, published by the Messrs. Appleton, New York, is greatly enriched by the Editor, (Professor Reed of Philadelphia) by an admirable selection of illustrations from Shakspeare, Milton, and Wordsworth, and also by an Index, and an instructive Introduction.

Every scholar knows the importance of the discipline which the mind receives from the accurate study of the Latin and Greek languages. There is nothing that can supply the place of it, or of some study akin to it. The book before us furnishes exercises admirably adapted to the purpose. It is the very book needed in our academies and common schools, for the use of higher classes in English studies who intend to learn no other language. If such is the alternative, by all means throw aside the common course of English Grammar and Rhetoric, and drill the pupil in this, till he shall learn to feast on the perfect beauty of proper words in proper places—till he shall love and appreciate his mother tongue, and acquire the habit of saying just what he means, and no more.

This ability to understand and appreciate accuracy in the use of language is of more importance than even educated men are generally apt to think. It is a trial to a writer's patience, when he has carefully expressed his opinions on a subject of public interest, having chosen the exact words whereby to say what he means and no more, to find that one of his readers understands him to mean this, and another that, and injustice is done him on every side, just because people are in the habit of seeing language used, and of using it themselves, loosely. This want of accuracy in regard to language does not exist as an evil by itself; want of accuracy in thought, goes with it; and the tendency of both is to the want of uprightness and straight-forwardness in life. Therefore, according to our judgement, the teacher will not err if he puts among the *first* on his list of books to be ordered, Professor Reed's edition of Graham's English Synonymes.

"One means of counteracting the current of evil which is constantly hurrying away so many to destruction, is the circulation of newspapers and journals which will diffuse light."

Yes—"which will diffuse light." But even if adapted to diffuse light—if of sound, healthful, invigorating, and inspiring character, a journal is not sun-like in this—that it can diffuse its blessed light, and all its choicest influences, *STANDING STILL*.—Alas for us! we are impatient in regard to those whom we cannot visit. No rays from a printing-

office can go a red beyond the printed sheet, except as some reader of the printed sheet may carry them. *Therefore*, good friends, ye who love the light, help to diffuse it. See that it reaches every family that may be the better for it. How more effectually can you do good to your country and your kind?

American Institute of Instruction.

The official notice of the meeting of the American Institute of Instruction to be held at Montpelier, will attract the attention of our readers. We trust that as many of them as can contrive to do so, will be present. The State Convention held at Chelsea last year was a meeting of great interest, and its proceedings full of instruction. The meeting of the Institute promises to be still more interesting, and if not more profitable to such as may attend it, it will not be for want of ability and experience in the gentlemen who are to lecture, and who will take part in the discussions. Let there be a full attendance,—especially of **TEACHERS**.

Enunciation.

Distinct and correct enunciation is apt to be overlooked in schools. Parents do not so readily observe indistinctness, because they are used to it; and as to any want of correctness, perhaps they may be guilty of it themselves.

In respect to indistinctness, teachers are liable to the same error with parents, as they soon become accustomed to a child's voice, and do not notice any little fault as a stranger would.

For these reasons, and considering how fundamental perfect distinctness is to good reading, it is important that *exercises in enunciation* should be attended to in every school. We regret to say that some series of reading books contain no such exercises, or next to none. Those of Russell and Goldsburry, Tower and Swann, are well supplied with them. Emerson, Town, Maudeville, Sanders, and Porter,* are deficient. We have been in schools lately where no book with suitable exercises of this sort was to be found. In such cases, the Teacher should either prepare exercises himself, or procure a book or chart containing them. There are many combinations of letters that most children need to be thoroughly drilled in, in order to good reading. There are many children who, on account of some special fault, original or acquired, never can read well without such drilling. They may practice till they are gray with it, and all in vain.

The "Preliminary Exercises in Articulation" in Russell's Primary Reader would answer well in most of our district schools.

* In some of these a few pages are devoted to the subject; but it comes too late in the series.

QUACKERY. A correspondent on the other side of the Mountains, whose soul is vexed within him by quackery in the matter of common schools, lets his feelings run away with his judgment in the choice of

words. True, hollow pretence and imposition in the matter of education is abominable before God and men; and we do need, as our correspondent says, real men and women in every sense of the word—those who will not be brow-beaten on the one hand, or meanly flattered on the other—for Teachers.

WANTS. At a late Common School Convention in Windham County, the want of good School houses was a prominent topic of discussion; also cleanliness in School rooms; and the following resolutions were adopted:—

Resolved, That more attention should be paid in district schools to the manner and morals of the pupils.

Resolved, That the comparative claims of wealth and education seem to be strangely misunderstood by those parents, who, while they give unequivocal demonstrations of interest in gain-getting pursuits, fail to manifest a corresponding interest in the cause of education.

Resolved, That for most of the defects in our district schools the active co-operation of parents in visiting them and sustaining teachers as well as in providing the necessary means of education is indispensable.

Resolved, That a good education is the best legacy parents can leave their children.

"You must so prepare yourself at home, that when you go into your school, you can make every eye *sparkle*, and every heart leap for joy at the interesting things you may say to them during the day's intercourse. Illustrate your recitations by something relating to them, and which, at the same time, is exceedingly interesting."

"That is not so easily done," you say. The question, dear friend, is not how you can get along with your school "easily," but how much it is *possible* for you to do, during these short weeks, for the benefit of these children. You may never have them under your care again. What you do for them at all, must probably be done now. How much *can* you do? They have a rightful claim—their parents have a rightful claim on you for the *very best* that you can do. Even if your wages are small, it does not alter the case. You have *agreed* to be the teacher; and that implies that your mind and heart shall be in the school. Merely to go through the common round of exercises, and *hear* the lessons, is not enough. Prepare yourself at home for every day's work, so that the school may expect *something new* every day.

NORMAL SCHOOL IN OHIO. By a recent act of the Legislature of Ohio, a Normal School for the preparation of Teachers of Common Schools, is to be established, and 25 sections of Salt Spring lands are appropriated for its support.

ORDER is the sanity of the mind, the health of the body, the peace of the city, the security of the state. As the beams to a house, as the bones to the microcosm of man, so is order to all things.—*Southey*.

Enterprise and Progress.

Our readers will remember the statement in our last respecting the large number of agricultural and educational papers taken in Wilmington. We cannot forbear copying from the *Eagle*, the following account of the prosperity, in both departments, that accompanies this reading:—

FROM THE COUNTY SUPERINTENDENT.

WILMINGTON, June 26, 1849.

The village of Wilmington has sprung up like a cherm within a few years, and is still improving. Several private dwelling-houses are going up the present season, and among them, one by Mr. Shafter, in the form of an octagon, standing upon an vated, oval spot of ground, over the brook. A few shade trees would be a great improvement in the appearance of this village. It is surprising that the enterprising people in the villages of Wisdham are so negligent in adorning their residences with shade trees. Fayetteville has set a good example the past year, which we hope the other villages will follow.

The farmers in Wilmington have been celebrated for making good maple sugar, and raising superior stock. A gentleman in the village showed me a cow, last evening, valued at fifty dollars, and a calf for which he had paid twenty. The value of the stock in the town has probably more than doubled within a few years, as also the profits from this stock. The houses of the farmers are painted, their fences in good repair, and all things around have the appearance of neatness, industry, competence, and thrift. The people in Wilmington, while improving their farms and their dwelling-houses, have not forgotten their schools. The new and commodious school-house, erected in the village last season, I learn, gives general satisfaction, and has been the means of giving a new impulse to the cause of education. In visiting the school, I was struck with the mannerly appearance of the children, their sense of propriety, and their ideas of right and wrong—so much in advance of most children in village schools. The scholars had not, as I understood, been remarkable for good manners or good behavior; and when I inquired of the teacher if she did not attribute the reform, in part, to the school-house, she (very modestly taking none of the credit to herself) replied, she thought half of it owing to the house, and the other half to the parents. The scholars all expected to behave better when they got into the new house, and the parents expecting they would, and sustained the teachers in raising the standard of morals among the pupils. The teacher had, however, evidently complied with the requisitions of the statute, which requires that instruction shall be given in "good behavior,"—though many teachers pay no more attention to good behavior, except to keep the children still, than to Greek or Hebrew. From the appearance of many schools, one would not infer that there was any such thing as a conscience, or a moral character, to be cultivated in children. I inquired of one parent in the village, if he did not

find it much easier to govern his children at home, when they received such instruction at school; he replied, "It's not half the work. This boy," said he, "has not been this summer, but he was a much better boy last winter, and the good instruction he then received at school has lasted ever since." The face of the mother, too, brightened up, as she spoke of the good influence of the school on her children. There is no necessity of the village school being a school of vice and ill manners, as it often is. Let parents, who have any regard for the conduct and character of their children, in the first place strive to get a *respectable* building for a school-house, and then employ and sustain a teacher who is capable of giving instruction in "good behavior," and they will find the common school a blessing instead of a curse.

There are, I see, a great many small schools in Wilmington; many have not over 19 or 20 scholars, and several have less than this number. I visited two schools yesterday, on the "Interval," and found only 10 in one and 12 in the other. These houses were only one mile and a half apart, on a good road, and it would seem desirable that both districts should unite. For two-thirds of the money it now costs to support their two schools, they might maintain one school for a longer time, and it would probably be better for the children. There are here, within a mile of the village, two or three districts which might conveniently unite with this district, and have better schools for their children, at less expense.

The people in Wilmington are far in advance of many towns in the county, in improving their schools. They have not thought it necessary to trample the school law under foot, in order to show their *independence* and *intelligence*, but have sustained the law; and their efficient town superintendents have been of great service in elevating their schools.

JAMES TUFTS.

To the Editors of the School Journal:

Please give your views upon the following question: Ought children under eight years of age, to be kept still, in school, when not employed upon their lessons?

I would suggest that there should be an extra joint between the thigh and the knee, so that enough of the leg could hang to reach the floor. One thing is certain—if children are not constructed on a different plan, in order to fit the seats, then the seats should be altered to fit the children.

Stockbridge, June 25, 1849.

REMARKS.

Perhaps we are a little old-fashioned in regard to the matter of sitting still. We think it a good plan to give children lessons in sitting still. It is important that they should be disciplined early in self-control; and a sitting-still lesson is one of the best means in the hands of the teacher for doing it. But it should be done well, with exact time and rule; and be regarded by all parties as a part of the school exercises for the benefit of the sitters.

Besides, if children are not taught to sit still till eight years old, they will find, and make, hard work,

when they go into a school where sitting still is the law.

When the children in a school are all small, they should be exercised in various ways, and kept under the direction of the teacher; there can be more variety of movement of feet, hands, and tongues, than where there are scholars of all ages. This is one of the great advantages of a classification of the children where they are numerous enough in a district to occupy several rooms. But our view of the matter is, that the teacher ought to control, as much as possible, every movement in the school room. Small children should not be made to sit still many minutes at a time; but then they should not be left uncontrolled; something should be contrived by the teacher to employ them according to rule.

As to sticking children up on a high bench, with their feet dangling in the air, and expecting them always to keep still in that position except when employed upon the A B C or the abc,—it is a way of tormenting young creatures that we hope never again to be obliged to witness.

For the School Journal.

The Geography of the Heavens.

The study of the geography of the Heavens, as they appear to us, viewed with the naked eye, is acknowledged to be one of the most interesting of all the branches of science. Not to have a knowledge of some kind of it, is, to say the least, being deprived of a great source of pleasure and profit. What satisfaction do we take in tracing the various constellations of the visible sky, as they appear in any clear night! How often have we stationed ourselves in some eligible situation, and commenced, first taking the great belt of the Zodiac, and with that as our equator, branching off into the different celestial latitudes, continuing our pleasing occupation far into the still hours of the night. Well do we remember the delight we experienced, when first we could point out to our associates Orion, the Bear, the Crown, the Lyre, those most beautiful constellations visible in our Hemisphere. If then our pleasure is so great, in beholding these works of the Almighty, appearing to us so grand and magnificent, how is it increased when we come to consider the facts brought to our view by the investigations of modern Astronomy. The ancients knew all that we have spoken of, but it was left for the moderns to unfold the vastness of the universe in something of its infinite grandeur and extent. When we consider the darkness in which they were enveloped, how do we wonder at the light which has since broken upon us! They supposed the earth to be the centre of the universe, around which the sun and moon, with all its attendant train of stars, revolved. We know that the earth is but one of a system of worlds, revolving around the sun as a common centre, that this sun is but one of many thousands of suns, all equally brilliant, and for aught we know many times more so. Indeed it is ascertained with regard to the nearest of the fixed stars, that light requires, at its usual rate (192,000 miles per second) the time of four years, to travel from it to us, and

that Sirius, the brightest of them, must be equal to fourteen times the light of our sun, and that light, is at least thirteen years in travelling the distance from it to us; still further do we know that this whole system of worlds and suns, is but a minute part of the universal system of God's creation. There is a vastness in the very thought of this, almost too much for mortal ken. But we will, according to our original intent, state the facts of this theory. Nor is this a mere theory; but facts themselves, as will be seen, go far to prove its actual truth.

It is believed, that, even with our most powerful instruments, we are able to see but a small portion of the universe. This appears first, from the fact, that, with every new addition of power to the telescope, myriads of, to us, new stars are brought to view; and secondly, from the fact, that there exist many nebulae, some of which, we are able to resolve, with an instrument of low powers, into multitudes of stellar points, but many of which, even with our best telescopes, appear as a faint misty vapor, whose component Stars cannot be seen. From these facts it is supposed, nay, proved, with almost a mathematical certainty, that all the fixed stars, which we can see, constitute but, as it were, a shoal or island of stars in the ocean of space, occupying but an infinitely small portion of it, and being of itself but one of an infinite number of similar shoals, scattered all about, through its measureless extent, a few of which appear to us in the form of nebulae, but by far the greater number are impossible to be seen. Imagine a small island, whose surface comprises but two or three square feet of sand, placed in the midst of a pond of ten acres in extent, what would this little spot be to the whole pond! Again imagine this little speck of land placed in the midst of the ocean, and you have some idea of the importance of this shoal of stars to the whole universe. Although the extent of this island in space cannot be measured and told in miles, yet its shape can be, and is truly defined. The appearance, which it would present, could it be viewed, externally, by itself, bears more resemblance to that of a brick with its corners rounded off, and one end split open, its sides separated as if cleaved by a wedge. The situation of the solar system with reference to the whole mass, is but little out of the centre, so that we are surrounded on every side by the other system—particles of the, to us, vast whole.

But some one asks, what are the proofs! Surely we are not to believe all this on the mere *dictum* of any man, however wise, and learned he may be? nor would astronomers have you. If the experiment be tried of directing the telescope to any particular point of the sky and then all the stars be counted and their number registered, which are in the field of view, and again it be repeated at random, in different parts, all over the sky; it will be found on comparing these notes, that the relation of the number, seen in the line of the equator is to that seen in the direction of the poles, as 4 to 122,—the general direction of the mass corresponding very nearly to North and South. This ratio increases at first slowly as you leave the equator, and more rapidly as you approach the poles.

A moment's reflection, will show any one that this is just as it should be if the shape is as we have described it. And moreover, as you approach the Southern extremity you find that on the right and left they are more numerous than at the middle, the sides branching off in both directions leaving a space comparatively clear of stars in the middle. Other proofs are adduced, and other facts proved, with regard to this theory, but these I think sufficient to give a general insight into the matter.

I fear I have wearied the patience of the reader long before this, and so will for necessity stop.—Verily how wonderful are thy works, O God; and what very atomies of being are we! D.

Out-Door Preparation.

Let your habits out of school be such that you can go there in a healthful state of body and mind. Often the wheels roll heavily in the afternoon, when a hearty dinner just before entering the schoolroom, may explain it all. One thinks the little noises in the room uncommonly frequent and annoying, when the previous long evening of unsound sleep has made him sensitive. Health alone can give constant cheerfulness, and enable one to see things as they are; so that a wrong to day shall seem no worse than it seemed yesterday; and so that the teacher will feel willing to allow the same indulgence at all times. Your pupils will be affected by the weather, and by the condition of your room, if you have not conveniences for keeping it always at a proper temperament and well ventilated; but you must not yield to these influences. The evils are doubled, if the discomforts which make the pupil restless, make you impatient. Teachers must see and feel these things; They must, at such times, relax a little, rather than tighten the restraints.

Cultivate a genial feeling towards your pupils. Let your countenance be spring-like to them. Love to see them happy. Inquire concerning their pastimes as you meet them by the way side, or about the school-house door. Stern faithfulness will not do the teacher's work. The children are full of feeling, and the teacher must sympathize with it, and thereby gain the power of guiding and educating it. To teach pupils kindly, that there is a plain, old fashioned way—obedience, and that to know it and walk in it, is more important than to learn geography and arithmetic.

Prepare for school by reflection on the *wants* of your pupils. This presupposes the careful study of their character to furnish the materials for reflection. This knowledge you will review, and review from each day's experience. You will find a distinct view of your pupils' wants, a strong incitement to exertion for them. You will go to your school-room every day, with something in your mind by which you hope to benefit certain individuals whom you have found to need such *care*. This work must be done for individual pupils. It is in vain to think of doing it on the mass. It is certainly as necessary for you to make preparations for your efforts to improve the dispositions, habits and feelings of particular pupils,

as it is that you know the intellectual condition of each, and go with particular topics in your mind on which you purpose to question them. You remember the principle in arithmetic which a boy did not understand, and watched opportunities for explaining and questioning; much more should you seek favorable opportunities and the best methods for remedying, as far as you can, his moral deficiencies. In this you can be greatly assisted by an acquaintance with the parents of your pupils. If they have good notions of discipline, they will help you much. If they have not, you will know what you are to try to do alone. You can, perhaps, by a modest defence of your own opinions, guide those parents who have not thought so much on early training as you have. The care you take to see parents, and to talk of the habits of their children, is evidence to them of your interest in your work. Assume in your conversation that parents inquire at night concerning the conduct and lessons of the day.

Visit schools, and read books on education. Almost every teacher has a good method of doing something. Seize upon it. No man writes a book without his good idea in it. Seize upon that. Seize upon *modes* and *theories* where you can find them; but take neither to your school-room in their crude state. But let me ask, what are your incentives to exertion? Have you in your mind a picture of a beautiful school, which you will strive to realize? It is very well. Do you crave the approval of good judges and good men? That is well. But duty and benevolence must be your abiding impulses. Cherish that sense of duty and that feeling of benevolence which the Bible teaches. Then, if you reflect on your pupils' wants, your energies will not stagnate. Responsibility to employers is less effective than responsibility to God. Ambition may urge, but a desire for a mortal crown is a poor stimulant to labors which the pupil can never see, to counsels, coercion, and restraint, whose first fruits are often dislike, rather than gratitude. What shall secure faithfulness in the thousand little cares and watchings, which, to the teacher, die when performed, and are in oblivion forever? Nothing but duty and benevolence.—*Mass. Teacher.*

THE JOURNAL FOR TEACHERS. A correspondent who has taken this paper from the beginning, and who for twelve years has been a farmer in summer and a Teacher in winter, remarks that he "should hardly know how to live a month without it." If all teachers had the same earnest desire for information and improvement, hundreds of our schools would wear a new face very soon.

He is to be educated, because he is a man, and not because he is to make shoes, nails, and pins.—*Channing.*

This is the substance of what we would say to those who disparage all studies but such as look at immediate results in the business of life. An educated man can very soon learn to do any thing that he applies himself to; an uneducated one will be slow

at learning anything, even how to handle a hoe, and probably never will learn what he needs to know about his own work. There is an expertness of mind acquired by proper education, just as there is expertness of hand acquired by practice. When a man with that expertness applies himself to agriculture, he soon knows how to manage; he soon discovers where he is deficient, and how to become skilful.

ASSAULT ON A SCHOOL TEACHER. We learn from the Worcester Spy, that Mrs. Porter of Worcester has been fined for assault and battery upon a lady school teacher, who, in the discharge of her duties, found it necessary to correct the pugnacious woman's son. The mother entered the school house immediately after her son had been corrected, and assailed the teacher with vituperative language, threatened to kill her, and seizing her by the shoulder held her fast, while she inflicted numerous blows upon her back and shoulders with a large stick and ruler. She also scratched her arm, raking the skin off, and saying she would 'skin her arm for her.'

The magistrate, in rendering judgment, stated that school teachers for the time being stood in the relation of parents to the children under their charge, and that they have a right to judge of the necessity of punishment, and also a right to inflict it. Parents when dissatisfied can appeal to the school committee. He fined the defendant \$10 and cost of prosecution, and ordered her to stand committed until the sentence was complied with, or she was discharged by due course of law.—*Springfield Rep.*

To keep school merely for the wages, toiling through the day for pence, while immortal minds, capable of indefinite growth in knowledge and power, are before you without awakening your whole soul to do them good—alas, alas!—better to dig ditches or scrub floors from morning to night, week in and week out, than to be such a teacher!

MAN A MATHEMATICAL BEING. The "North Bridgewater (Mass.) Reporter and Union," is laboring to prove that man has a rule for everything and is a mathematical being. Says the Reporter, "He eats and drinks by Addition, and sleeps by means of Position; gets married by Compound Fellowship, rears a family by Multiplication, gets office by means of Interest, and if he belongs to the Profession, relies upon Practice for his support."

He who is contented with himself must certainly have a bad taste.

All who have meditated on the art of governing mankind, have been convinced, that the fate of empires depends on the education of youth.—*Aristotle.*

Ogilby, the translator of Homer and Virgil, was unacquainted with the Latin and Greek till he was past fifty.

Franklin did not fully commence his philosophical pursuits till he had reached his fiftieth year. How many among us of thirty, forty, and fifty, who read

nothing but newspapers for the want of a taste for natural philosophy! But they are *too old to learn.*

AMERICAN INSTITUTE OF INSTRUCTION.

ANNUAL MEETING.

The Twentieth Annual Meeting of the American Institute of Instruction will be held at Montpelier, Vt., on the 14th, 15th, and 16th of August. A course of lectures will be given, and it is customary to make topics treated in them subjects of subsequent discussion, in which all present are invited to participate. Written communications, on appropriate topics, from ladies, or others who may prefer that mode of expressing their thoughts, will be received and read. The meetings of the Institute are open to the public, and all are invited to attend.

PROGRAMME OF LECTURES.

TUESDAY, at 10 o'clock—Opening of the Institute, and remarks by the President.

11 o'clock—Introductory Address by Bishop Hopkins, on "The defect of the principle of Religious Authority in Modern Education."

3 o'clock—Prof. W. G. T. Shedd, of Burlington College, on "The relative position and influence of Collegiate Education as a complete system of State Education."

5 or 7 o'clock—President Labaree, of Middlebury College, on "The Education demanded by the popular character of our Civil Institutions."

WEDNESDAY, at 9 o'clock—Roger S. Howard, of Thetford, Vt., on "Earnestness."

11 o'clock—William C. Goldthwaite, of Westfield, Mass., on "Practical Education."

3 o'clock—Thomas H. Palmer, of Pittsford, Vt., on "Essentials of Education."

5 o'clock—William O. Ayres, of Boston, on "The claims of Natural History as a branch of Common School Education."

7 o'clock—Rev. L. Whiting, of Lawrence, Mass., on "Mastership in School."

THURSDAY, at 9 o'clock, Rev. Dr. Sears, of Newton, Mass., on "The Uses of the Imagination in Schools and Real Life."

11 o'clock—Rev. W. H. Lord, of Montpelier, Vt., on "The Elements of a thorough Education."

3 o'clock—Prof. E. D. Sanborn, of Dartmouth College, on "Education the Condition of National Greatness."

6 or 7 o'clock—Rev. Charles Brooks, of Boston, on "The Duties of Legislatures in relation to Schools."

By order of the Committee of Arrangements,
JOHN D. PHILBRICK, Rec. Sec'y.

Boston, July 16, 1849.

¶ Editors in Vermont are respectfully requested to insert in their papers the above notice, and if convenient, to continue it until the time of the meeting.

THE SCHOOL JOURNAL AND VT. AGRICULTURIST may be had of J. B. Copeland, Middlebury, the same as formerly at the book-store of L. W. Clark; also of J. Steen, Brattleboro'; J. W. Howes, Montpelier; J. S. Pierce & Co., Burlington; J. Barrett & Son, Rutland; and Rev. J. D. Wickham, Manchester. To all these places we send the paper, when desired, free of expense. Orders respectfully solicited.

Aug. 1, 1849.

BISHOP & TRACY.

WONDERS OF PHILOSOPHY. The polypus receives new life from the knife which is lifted to destroy it. The fly-spider lays an egg as large as itself. There are 4,041 muscles in a caterpillar. Hook discovered 14,000 mirrors in the eye of a drone; and to effect the respiration of a carp, 13,600 arteries, vessels, veins, bones, &c., are necessary. The body of every spider contains four little masses, pierced with a multitude of imperceptible holes, each hole permitting the passage of a single thread; all the threads, to the amount of 1000 to each mass, join together when the spider spins its web,—so that what we call a spider's thread consists of more than 1000 united. Leuwenhoek, by means of a microscope, observed spiders no larger than a grain of sand, who spun threads so fine it took 400 of them to equal in magnitude a single hair.

"Hocus Pocus." Short, in a note to his history of England, thinks that the common derivation of *hocus pocus* from a rapid pronouncing of *hoc est corpus*, is hardly admissible; and seems to prefer its derivation from the name of *Ochus Bochus*, a Saxon magician. He also says that *Luck*, probably comes from a Saxon Deity, *Loke*; *Deuce*, from certain demons, called *Duci* by the Gauls; and *Old Nick*, from Necus, a malign deity, who frequented waters.

An old physician whom we once knew and who exhibited a remarkable penchant for derivations, expressed the belief that *hilar* *skiller* came from the usual form of dismissing a congregation in the old Catholic churches, in which the words *Abite hilariter et celeriter* were used.

PRONUNCIATION OF ORIENTAL, OR INDIAN NAMES. The vowels alone need to be attended to, and they are pronounced as those of the Italian language.—Thus the English vowels take for their corresponding Eastern sound—*a* as in the English word far; *e* as *e* in set; *i* as *i* in pit; *j* (for *j* is a vowel in Italian and in all the oriental tongues) as double *e* in fee; *o* as *o* in robe; *u*, as double *o* in poor. Thus Kaubul is properly sounded as Kobool; Shujah, as Shooyah, the double *e* of the *j* having the sound of *y*, when preceeding a vowel; the Punjaub, as Poonyob; Hindustan as Hindoostan; Maharajah, as Marharayasaah and so on.

AIMING AT PERFECTION. There is no manner of inconvenience in having a pattern propounded to us of so great perfection as to be above our reach to attain to; and there may be great advantage in it.—The way to excel in any kind is to propose the brightest and most perfect examples to our imitation. No man can write after too good and perfect a copy; and though he can never reach the perfection of it, yet he is likely to learn more than by one less perfect.—He that aims at the heavens, which yet he is sure to come short of, is like to shoot higher than he that aims at a mark within his reach.

LAZINESS. Laziness grows on people; it begins in cobwebs and ends in iron chains. The more busi-

ness a man has to do the more he is able to accomplish, for he learns to economize his time.

Slow and Sure.

In forty years of steady work, so Eastern travellers say,

The Chinese made a porcelain cup of Oriental clay—
In Bagdad they form easily a hundred in a day;
But princes seek and prize the one—the other's
thrown away.

The chicken walks from out its shell, and goes its food to find,

While helpless lies for months and years the child of human kind,

Which yet, by gradual growth, o'ertops all else in strength and mind,

O slow of thought! remember this—be thankful and resigned!

For the School Journal.

PHILOSOPHICAL QUESTION.

If a dam be built in a river, say with ten feet fall in a mile, why does the water set back beyond the level of the dam?

Two or three cases of litigation have happened in our courts in Vermont, in which this principle has been involved; and damages have been awarded for flowing land, in one case, I am informed, nearly two feet higher than the level of the fall.

CHEMICAL QUESTION.

What is the rationale of the formation of *anchor ice* about stones at the bottom of a river, in cold weather?
FITZ JAMES.

Enigma.

I am composed of 11 letters.

My 1, 7, 9, is a scourge to every nation.

My 8, 3, 4, 5, is an article used by farmer's wives.

My 1, 10, 5, is a very useful article.

My 2, 10, 11, is an adverb.

My 6, 10, 1, is an act of politeness.

My whole is an article that every Farmer or Mechanic ought to have.
JIM.

Solution of the Puzzle, page 39.

SIX—IX—S. IX—X—I. XL—L—X.
S I X—SIX.
ZETA.

ENIGMA.

I am a little patch of ground,

Four letters are my utmost bound;

Transposed, I wear out human life—

Again, I run with eager strife.

MATHEMATICAL QUESTION.

It was observed that a cylindrical tub, whose length was just double the diameter, held ten gallons more when full, than when inclined in an angle of forty-five degrees from the perpendicular. The dimensions and capacity of the vessel are required—a gallon being supposed to contain 231 cubic inches.

THE AGRICULTURIST.

Science for Farmers.

There is a life in vegetables, as well as in animals, and that life is sustained in both by *feeding*. There is the same difference, too, among vegetables as among animals, in regard to original vigor and capability of being made into vigor and good specimens by proper feeding. If an ill-bred, puny calf can never be made a first-rate stalled ox—no more can a plant, that starts into life feeble or diseased, be made perfect in its kind. And if a good calf can be ruined for want of sufficient or appropriate food, so may a good hill of corn.

And here is the demand for science in agriculture. A gentleman selected every year, for ten years, the largest of his Lima beans for seed. The result was, that he had beans of twice the common size; and as the largest pods are generally the earliest, he had gained in that respect also, so as to be in the market before his neighbors, and obtain the best prices. Another selected the earliest of another kind for a series of years, and in the end had them ripen two weeks earlier than usual. A gentleman who made great profits by selling seed wheat, so superior as to look like a new kind, gained the reputation, and in consequence, the cash, by sowing none but plump seed, all inferior kernels being rejected. And so it is in regard to every kind of crop. It is just as necessary to have good seed, and improvements may just as certainly be made in *breeds* of plants, as in sheep, horses, or swine.

This point being attended to, the next is, to provide suitably for the germination of the seed and the growth of the plant. Providence is so kind, nature is as genial, that germination and growth, after a fashion, will follow almost any treatment. But no farmer has gone through a corn-field without noticing some spots and some hills far more productive than others. Often in large fields there are small patches or single hills so productive, that were all equal to them, the crop would not be less than a hundred bushels an acre. It is not chance. It is just because the seeds planted in those patches or hills were placed in circumstances favorable to productiveness. There is no magic about it—nothing beyond the power of an intelligent cultivator to discover—nothing but what, having discovered it, he can diffuse over his whole field, so as to make the whole equal to the best spot. Professor Mapes states that by subsoiling and manuring, he has, since 1847, turned 32 acres of apparently worthless soil, into a garden capable of raising any crop, in comparison with any field in the State. He has full varieties of crops *without a failure*. He has been neither lucky nor unlucky, he says; but has attained the best results simply by adopting the best means. He takes good seed, puts it at the proper depth into well prepared soil, and gives it food adapted to its particular wants; and the result is certain. Visitors to his farm, from all parts of the country, are so convinced by what they see, as always to leave with the

determination to know what they are about in the treatment of their crops.

Professor Mapes is a man of science, and his practice implies a knowledge of the action of different fertilizers and stimulants, of the wants of different crops, and of the nature of the soils he cultivates. No man can, except by chance, obtain results like his without something of his knowledge in these respects. We are glad that he is diffusing it as fast as he can, in the *Working Farmer*, an excellent journal, in which, among other things, he is discussing thoroughly the subject of manures, with the express design of enabling the attentive reader to *feed his crops scientifically*.

Mutton and Fine Wool.

The Boston Cultivator has a cut of an improved Cotswold, or new Oxfordshire sheep, with the following remarks:—

"As this is the season for the sale and letting of sheep for the purpose of improving our flocks by judicious crossing, we again present our readers with the above beautifully depicted animal of the improved Cotswold or new Oxfordshire breed, than which, it would appear from advices received from abroad as well as at home, nothing can be found superior, taking into account wool and mutton. At length the oft proposed experiment to cross the finest of the Oxfordshire ewes with the heaviest fleeced Merino or Saxon ram has been made, and, as we had repeatedly given it as our firm conviction, the result has proved precisely that which we foretold. With a much enlarged carcass when compared with the sire, and a much improved fleece when compared with the dam, the progeny has lost but little in weight of carcass, when compared with the former, or in weight of fleece when compared with the latter—two most important facts, which add exceedingly to its value."

Culture of the Plum.

"An old Digger", in the *Horticulturist*, says:—
"Plum trees like a moist soil. I have found that covering the ground four inches deep with old spent *tan-bark*, is a good way of preserving the moisture, and keeping the tree in health. I scatter fresh lime thickly over the surface of the tan every year, as soon as the green fruit begins to fall. This kills every circle that attempts to enter the ground. The tan prevents the weeds from growing, keeps the roots cool, and insures me good crops of plums. I spread it as far as the roots extend, and it wants renewing, or adding to, once in three or four years."

CLOSE PLANTING. When a boy, at home on my father's farm, we planted a field with potatoes, two thirds of which was fine dark colored bottom land in excellent condition; upon this we expended our stable manure, and finished all up with the greatest care. We then made the experiment upon the other third of the land, which was nothing more than a miserable poor sand-bank, of planting it with potatoes, covering them thickly in the rows with the long straw and litter of the barn yard, and turning upon it a

very thick furrow of the sand; and leaving them without any working, hand-hoeing once only. At the time of taking up, we had a good, a very good crop on the rich land; but when we came to the sand, we were truly surprised to find an enormous yield, many of the roots giving a peck of potatoes each. It must be admitted, that the season was favorable but not more so for the sand bank than for the good land, the crop from the latter being also good, while the former was super-excellent.—*Boston Cultivator*.

For the Vermont Agriculturist.

Facts in Chemistry—No. 2.

In a former paper it was stated, that with the exception of the small amount of earthy substances forming ashes, plants are wholly composed of the four simple elements—carbon, oxygen, hydrogen, and nitrogen; and that these four elements are usually combined for the use of plants, into three compound substances, viz: carbonic acid gas, water, and ammonia. It may be added that these three compound substances contain the elements necessary for the support of animals and vegetables, and that the same substances are the ultimate products of the chemical processes of decay and putrefaction. All the innumerable products of vitality resume, after death, the original form from which they sprung; and thus death becomes the source of life for a new generation.

When the process of germination is over, the plant is found provided, by means of its roots and leaves, with the means of procuring, from the atmosphere and soil, such nutriment as its future offices require. For the growth of the wood, the stalks, leaves, &c., carbon, hydrogen, and oxygen, are required; and these substances form also most of the other products, as sugar, gum, starch, resins, oils, and acids. But, in addition, nitrogen is required. Compared with the other elements, the amount of nitrogen in any plant is small, yet it is of great importance, as the nutritive power of each plant, when used as food, is in proportion to the quantity of nitrogen it contains. By experiment it has been ascertained that the quantity of nitrogen which is converted into animal matter in the growth of herbivorous animals, is derived from, and equal to that contained in, the vegetables used as food. Nitrogen is a component part of ammonia, and that part which constitutes its principal value as a fertilizer. An increase of the animal manure from which the ammonia is principally derived, gives rise not only to an increase in the number of seeds, but also to a most remarkable difference in the proportions of the substances containing nitrogen, such as the gluten, albumen, &c., which they contain.

But ammonia is not furnished to plants exclusively by the direct application of manures. It is the last product of putrefaction, and a generation of one thousand millions of men every thirty years, and many thousands of millions of animals in a much shorter period, die and their bodies decay, yielding the nitrogen which they contain to the atmosphere, in the form of ammonia. It is well ascertained that ammonia exists in the atmosphere, though in so small

quantities that it cannot be detected by analysis.—Having a strong affinity for water, it descends in solution with rain, with which it is always found, and is thus conveyed to the leaves and roots of plants.—In a continent uncultivated, therefore, the amount of ammonia received from the atmosphere and returned to it, would be reciprocal and equal; but a farm in a cultivated country, from which animals and produce, containing a large amount of nitrogen, are yearly turned off, needs artificial means to restore the exhausted element so essential to fertility, and by the use of these means the skillful farmer is continually increasing the amount which his crops need for nutriment. The application of manures not only supplies ammonia directly, but serves to collect and hold for the use of plants the ammonia of the atmosphere. Brought down by the rain, it will soon escape again into the atmosphere, if it is not seized by some agent and held in the soil, subject to the demands of the rootlets of plants. This office is performed by plaster of paris, charcoal dust, decaying vegetables, &c. The same object may be obtained, in a measure, by the rotation of crops. Plants vary exceedingly in the facility with which they derive ammonia from the air. Wheat has no power to obtain its ammonia from the atmosphere, while clover, peas, &c., possess this character in the greatest vigor. But wheat is rich in nitrogen, which it must therefore draw from the organic matters in the soil, to restore which, in a measure, a crop of clover will be valuable to follow the wheat.

It has been said that the stalks and leaves of plants returned to the soil, constitute the proper manure for another crop of the same kind. (See Rep. of Patents, 1845, p. 1047.) But the roots, stems, and leaves of plants, such are rejected in the collection of the crop, contain little nitrogen. Hence the residue of a former season may manure the land abundantly, so far as carbon is concerned, but be quite incapable of supplying nitrogen, and in providing materials for a future abundant crop. If any benefits result from such an application, it must consist in a secondary effect of the substances so applied, in absorbing the ammonia brought down by the rains from the atmosphere, and yielding it to the plant as it is needed.

Some farmers are very public spirited, and not only relinquish all claim to their share of the ammonia of the atmosphere, but, with unbounded benevolence, contribute to the general stock, by allowing their manure to lay through the season spread over their yards, so that all the ammonia, which is exceedingly volatile, may escape into the air. This is loving one's neighbor better than himself. Others are so miserly that they are sure to get all their manure out in the spring, and ploughed in for the use of their own crops; or if that cannot be done, they pile it up in their yards, composting it with muck, loam, &c., covering it up and spreading plaster over it, so that the rest of the world cannot get a smell of it. Some even go so far as to scrape up the droppings of their cattle every morning, into a pile in the yard, and cover it with muck. Now this is supreme selfishness; and those who are guilty of such practices, ought to

be turned over to the Socialists, and taught more correct notions of right and wrong. AGRICOLA.

OLD FRUIT TREES. At an agricultural meeting in Boston, Mr. Jones of Weymouth stated that he had tried with good success the plan of grafting old trees—some of them very old. In this way he had succeeded in a few years in getting 8 to 12 barrels of excellent apples every year from single trees which before were worthless.

Mr. Merriam of Tewksbury made a statement to the same effect. He gets a fine crop in about four years.

TO RAISE GOOD TREES FOR YOURSELF. Plant seeds from a vigorous and hardy tree, and from a large apple of its kind; in a rich, mellow soil.

2. Transplant when a year old, cutting off the tap root.

3. The next August (early) bud them near the ground, if growing vigorously; if not, whip graft them the next spring, or bud the following August.

4. Let the side shoots all grow the first year, so as to make a stout trunk:—better that they should not run up slim and tall.

5. Place them in your orchard when two or three years from the bud, and cultivate them like so many pet hills of corn, with frequent dressings of ashes.

If you buy trees, find, if you can, such as have been treated in this way.

PRESERVING BUDS AND GRAFTS. The mode suggested by T. O. Yeomans, of Walworth, N. Y., for preserving the scions of fruit trees, in moist saw-dust, has proved superior to any other. It is better than damp moss in the facility with which the scion may be perfectly embedded in it, leaving no interstices, and it excels most sand in being lighter, more spongy, and entirely free from a grit which may injure a knife. We have without any difficulty preserved scions, which were cut in the summer, for budding till the following spring, and inserted them as grafts with entire success; and we have kept winter-cut grafts till mid-summer perfectly fresh, and employed them successfully in budding. A bushel of saw-dust will retain its moisture for many weeks nearly unaltered; but water must not be applied too copiously, or water soaking and decay will be the result. The north side of a building, or a cellar, is the best place. —*Farmer and Mechanic.*

Scions may be cut any time after the buds are formed in August and before they begin to swell in April.

TREATMENT OF BEES. Mr. J. Oates, of Tendring Hall, gives the following as his treating of bees:—I make a hole in the ground, then place an empty hive upside down, as nearly as possible the size of the one I intend to fumigate; I then place my little apparatus, which contains a piece of lighted fungus about the size of a hen's egg. When the smoke begins to rise, I place the hive which contains the bees over it; and then, with a cloth wrapped round them to prevent any escape of the perfume, in five

minutes, they will be perfectly stupified. I then give the hive two or three gentle taps, which will cause those that are hanging to the comb to drop into the hive below. I then spread a large white cloth and turn the bees on it, when I can examine them with perfect safety. I let them remain till the second hive has undergone the same process. I add these also, to those on the cloth. I then look for the queens, but have not at all times been successful in finding them both. If I find both, I kill one; but my friends tell me this is not necessary, as I need not go to that trouble, for the bees will kill one themselves, and not have two mistresses in one house. I then mix them together and put them back into that hive which has the most honey in it. I consider this a better plan than burning them. Hitherto, mine have done well. I have done several for my neighbors, which have also done well, and they are at the present time strong. —*London paper.*

Interesting Agricultural Experiments.

Some recent experiments in wheat and flour go to prove that both contain water, and that the quantity is more in cold countries than in warm. In Alsace from 16 to 20 per cent. In England, from 14 to 17 per cent. In the United States, from 12 to 14 per cent. In Africa and Sicily, from 9 to 11 per cent.—This accounts for the fact that the same weight of Southern flour yields more bread than the Northern. English wheat yields 13 pounds more to the quarter than the Scotch. Alabama flour, it is said, yields 20 per cent. more than Cincinnati. And in general American flour, according to the authority of one of the most extensive London bakers, absorbs 8 or 10 per cent. more of its own weight of water in being made into bread than the English. The warmer the country, the more is the water dried out of the grain before it ripens, and hence, when made into bread it absorbs more water again, and is therefore more valuable. Professor Beck has written a report to the patent office, in which he shows that the presence of water unfits these articles for preservation. The books of a single inspector in New York city showed that in 1847 he inspected 218,679 barrels sour and musty flour. Every year the total loss in the United States from moisture in wheat and flour is estimated at from 3,000,000 to \$5,000,000! To remedy this great evil, the grain should be well ripened and well dried before being stored in a good granary. Kiln drying is preferable. The mode of ascertaining the amount of water is this. Take a small sample, say 5 ounces and weigh it carefully. Put it in a dry vessel, which should be heated with boiling water. After six or seven hours weigh it carefully, until it loses no more weight. Its loss of weight shows the original amount of water.

GREAT FLEECE. Hiram French, Esq., of Meredith sheared from a ewe sheep, last June, 11½ pounds of wool. The sheep is 26 months old, of the Leicester breed. She produced about the same quantity of wool the year before.—*N. H. Patriot.*

Sowing Grass Seed.

The hay crop in Maine being the most valuable and important of all our crops, whatever immediately relates to its production must be of interest to every farmer. And to proper seeding down to grass depends much of the success and profit of the crop.—When the soil is brought into good condition for grass it is very important that a good "catch" be obtained of some grasses which are in themselves valuable for hay and adapted to the soil and situation, and one too, that will hold out until the land requires to be again manured. A failure in this matter makes an important difference in the profits of the farm.

With many farmers, herds grass and clover are the only grasses sown together. It is very probable that in many places other varieties would answer a better purpose. On some farms it would perhaps be well to give all the best varieties which are adapted to our situation and climate, a trial. Those which are best suited with the soil of each field will be likely to gain possession of it. And when there is a large variety of seed in the soil and on the farm, we think more fodder will be produced than with a less number of kinds. When the soil becomes so reduced that it will not sustain those of more luxuriant growth, it may sustain others which are better able to thrive on a poorer soil; and under such circumstances it is better to have the latter than not to have them.—Let us not only have herd's grass and clover, but also red-top, orchard grass, white clover, Rhode Island grass, blue joint, fowl meadow and even other varieties, as they may be found to be of value.

There has been some difference of opinion as to the proper time for sowing grass seed. We have succeeded very well with herd's grass when sown in August or September, while the clover sown with it did not survive the winter spring. If clover and herd's grass are to be sown together, we should prefer to sow them in the spring.

When grass seed is sowed with wheat, rye or barley, we have generally succeeded in getting a good "catch" while we have never been so successful with oats. We have supposed that the oats might shade and choke the young grass more than other grain. Even where the oats are taken off quite early and the grass had come up well, it has not seemed to do so well afterwards as we had reason to expect. A farmer in Dresden remarked to us that he had uniformly succeeded better with his grass when sown with oats, than with any other crop. He attributed the general complaint against oats in this respect, to their being generally mowed so close. In this way much of the young grass is cut down, and what is left is very much exposed. He was not anxious to save all the straw, and purposely left stubble enough to protect the grass, while he was careful to let the scythe pass over it in mowing.

At the present time, the price of grass seed is unusually high, and farmers who have to buy their seed will be likely to err in sowing too little. We think that many have failed to obtain good crops of grass by not sowing seed enough. When we seed down to grass we usually expect to gather at least two or three

crops from that seed, and if the withholding of a few pounds or a few quarts of seed will materially diminish the annual produce for several years, as we think it may, it is certainly not good economy to withhold it.

We are of the opinion that fourteen pounds of clover and a peck of herd's grass seed to the acre is better than any less quantity. By sowing seed enough, the weeds and foul stuff may be kept down the more effectual. The hay too is finer and better, and the grass will not so soon run out. {For hay a greater quantity of seed is required per acre than would be required if the plants were cultivated for their seed. Sir John Sinclair says, "it is a great error in laying land to grass, to sow an insufficient quantity of seeds. In general twelve or fourteen pounds of clover is the usual average allowance. But that quantity, it is contended, ought greatly to be increased, and in many cases doubled." Says Pason Williams, Esq., "the quantity of grass seed used by me is never less than twelve pounds of clover and one peck of herd's grass to the acre."

In 1843 Isaac Bowles, Esq., of Winthrop, raised on one acre and a quarter of land, two crops of hay, which amounted in the aggregate to six tons eighteen hundred cwt. seven pounds. In the spring of 1842 he sowed on this ground with his wheat *THIRTY pounds of red and white clover, and one peck of herd's grass seed.*—*Maine Farmer.*

PROFITS OF FARMING. The July number of the (Baltimore) American Farmer contains a highly interesting communication on the above named subject, from Edmund Ruffin, Esq., of Virginia, author of a well known and highly esteemed work on "Calcareous Manures," and one of the most distinguished practical farmers in the Ancient Dominion. Successful in all his own efforts in the renovation of old exhausted lands, Mr. R.'s experience is the more authoritative, as well as interesting; and his account is a very encouraging one of the profit that may be actually realized in the intelligent pursuit of those rural occupations, which, in other respects, are known to yield such goodly returns of health, independence and happiness. Mr. Ruffin gives the results of his farming operations for five years, the profit and loss account of which is as follows: for the first year, there was a small loss of 27-100ths of one per cent; second year, a net profit of 8.16 per cent; third year, a profit of 12.81 per cent; fourth year, a profit of 23.86 per cent; fifth year, a profit of 20.10 per cent. The average profit for the whole five years was nearly 13 per cent; and all this exclusive of the enhanced value of the property from improvement of soil, &c., &c. We suppose it is not every farmer who can do so well as this; but industry, intelligence and business habits and principles always command success in town and country.—*Phil. N. American.*

A COW WORTH HAVING. Mr. Geo. B. Binkerhoff of Owasco, made from one cow, five years old, the past spring, *eighteen lbs. 2 ozs.* of butter for the week ending Saturday, June 30th. This quantity she

averages during the summer season. The summer she was three years old she made eighteen lbs. per week, and she would have made more for the above week, but for the fact that three of the very hottest days of the season were included in it. In flavor and color it was equal to any we ever ate, and we doubt if it be excelled by the celebrated Orange County butter. The cow can be bought for \$100.—*Auburn Journal*.

TIME FOR CUTTING WHEAT. According to accurate experiments, wheat cut ten days before it is ripe yields more flour than that cut earlier or later; and the flour contains more gluten. The straw, of course, is more valuable for fodder if cut early.

Good Farming.

Mr. John Johnston, near Geneva, had on his farm a cow, which probably gives more milk than any other cow in the United States. Through the month of June 1848, she gave 42 quarts per day; and for five days she gave 45 quarts per day; which is probably without any parallel in this country. From the cream only, they made 14½ lbs. butter per week. Had they churned from the milk, they would have got more butter. The cow was milked three times a day. The only feed she got, was grass in the pasture. She is of a roan color, half Durham and half native breed, and is seven years old. She is finely formed, and a handsome animal. She was raised by Mr. Johnston, who says she will be a good cow at 12 years or more. He has 8 cows in his pasture of clover up to their knees, all fine animals, which it is a pleasure to look at.

Mr. Johnston is a Scotch farmer and grazier of great celebrity, and sells many fat cattle for New York. He has a farm of 306 acres, in one compact body of land, on the east side of Seneca Lake, about 3 miles from Geneva, in fields of 8 to 18 acres all in the best condition. One field of 18 acres of Indian corn, last year yielded 83 bushels of shelled corn per acre. One field of 8 acres yielded 91 bushels and 45 lbs. of corn per acre,—and a field of wheat of 16 acres, yielded 45 bushels per acre. Mr. Johnston drains his land by underground draining, and has some miles of earthen pipes (made at Waterloo) which he has been laying the last 8 years. From the rich feed in his pastures, the cattle are all in the best condition. He does not feed his grass down to the ground. This he calls bad farming,—as the roots get scorched by the summer drought, and frozen in winter. But a covering of grass protects the roots from both, and also keeps the cattle in good condition. He has large barns, and yards and sheds for the cattle. In the yards the cattle make large quantities of manure—from wheat straw. He carts no mud from meadows into his barnyard. He puts the manure on the land in the fall, spreading and ploughing it at once, and not letting it remain for the sun and wind to dry up.

He observed to the writer of this, that he never saw land too highly manured, but he had seen much land too little manured. Land will always give a re-

turn for all that is put upon it. The best proof of this is, that the last 20 years, he has brought his farm from what was called *worn out land*, to its present superior condition, not by borrowed capital, but solely by the proceeds of the farm itself, obtained by his practical knowledge of good farming, combined with industry and economy.—*Journal of Commerce*.

Currant Bushes.

The following, copied from the Michigan Farmer, furnishes a hint which may be of much practical value to those who are about preparing plantations of this fruit:

"Having ascertained that currant bushes may as well be made trees as shrubs, I conclude to tell you how I have seen it done. In the spring of 1838 my father commenced a garden, and among other things cuttings for currant bushes. I determined to make an experiment on one of these cuttings, and as soon as it grew I pinched off all the leaves except the top tuft, which I let grow. This cutting was about fourteen inches high, and during the summer the sprout from the top of this grew perhaps ten inches. The next season I pinched off all the leaves to about half way up the first year's growth, so as to have the lowermost limbs about two feet from the ground. It branched well, became a handsome little dwarf tree, and when it came to bear fruit, it was more productive than any other bush in the garden, and the fruit larger. It was less infested with spiders and insects; hens could not pick off the fruit, and grass and weeds were more easily kept from about the roots, and it was an ornament instead of a blemish. Now I would propose that currant cuttings be set in rows about four and a half or five feet apart each way, (let them be long, straight ones,) and trained into trees."

In the cultivation of the currant, great care should be had to keep the ground clean and loose. The best manure we have ever used is that obtained from the door-yard, composed of rotten chips, saw-dust and bark, with a little lime gypsum, or house ashes. Dung, in its raw and unfermented state, ought never to be applied. Frequent irrigation with soap-suds produces highly salutary effects on this fruit, and may be profitably continued as long as the plants continue to fruit.

DEEP PLOUGHING. I was pleased with the remarks of "J. M. F.," your correspondent from West Stockbridge, and fully agree with him. I think many facts might be brought to light, proving the importance of deep ploughing, for light soils in particular. In the fall of 1836, I lived with my father in Chelmsford, Mass., and ploughed a piece of land for winter rye; the soil was light and sandy. I ploughed it very deep—nearly to the beam of the plough. One of the neighbors came along and told me I was spoiling the land, and should raise nothing by turning up the cold yellow dirt; his father never did so, &c. The same piece of ground was sown deep every year, and sowed with winter rye for ten years in succession. The first year the crop was small; second a little better; and the crops continued to increase

until the fifth year, when a heavy crop was harvested. It was astonishing to see the change which had taken place in the quality of the soil. As far as the plough had reached, it was black and rich, and bore heavy crops of rye until 1846, when it went into other hands, and is now used as corn land. Now the question is what caused the improvement? There was no manure used but the wheat and stubble ploughed in, and a crop taken off ten years in succession. These are facts that came under my own observation and can be proved by others.—*Dollar Newspaper*.

PRIZE ESSAY. The London Athenæum says that the Belgium government has instituted a prize of five thousand francs, with a gold medal and one thousand francs respectively, the first for the best work on general agriculture, and the second for the best treatise on the disease of the potatoes. Foreigners are invited to compete, and manuscripts are to be sent to the Ministry for the Interior before the 1st of January in next year.

A Morris County Farmer.

In passing through Morristown, the county seat of Morris Co., a most delightful village for a summer residence, I heard of a man who had sneeringly been represented as a "New York farmer," a "city farmer," a "book-farmer," &c. &c. Knowing that the place he occupied was completely run down at the time purchased, it being, as was waggishly said "under two-rail fence," and flat on the ground at that, I was determined to see for myself what had been accomplished by a man almost wholly unacquainted both with the theory and the practice of agriculture.

In 1844 he commenced erecting his buildings, which are peculiar in their construction, all of his own planning, and combining greater convenience, both in the house and out-buildings, than I recollect seeing from any other similar outlay, the whole expenditure not exceeding \$6000. In the spring of 1847, he removed his family from New York, before which time he had done little more than to set out fruit trees and repair the border fences. His next object was to accumulate manure, sow, and plow under green crops. By the use of bone dust and other fertilizers, he succeeded in growing a fine crop of buckwheat and oats, which he ploughed under as deep as he conveniently could without the aid of a subsoil plough. Into his barnyard, which is partly roofed over, he hauls everything that can be collected suitable for making manure, keeping the surface perfectly dry, by covering the whole, as it becomes filthy, with refuse hay and straw. It is estimated that he has on his farm at the present time, 250 loads (28 bushels to each load) of barnyard and pigstye manure; 300 barrels of poudrette of his own manufacture; 500 bushels of oyster shell lime; 14,000 pounds of horn shavings, and if anything more is wanted he will make up the deficiency in guano.

This "gentleman farmer" is also paying much attention to the cultivation of fruit, and has some fine specimens of healthy, rapid growing trees, which he

has taken great pains to set out. In planting them he first digs large holes, say three or four feet in diameter, the bottoms of which he covers with small stones, then with rich compost formed of turf, leaf, mould, wood, wood ashes, bone dust and oyster shell lime. Then, after cutting off the tap-root, he sets the tree in the position he wishes it to grow, straightening the other roots horizontally, and fills up the hole with rich virgin soil, also mixed with bone dust, wood ashes and oyster shell lime. After this he cultivates his trees as he would a crop of corn.

He is reclaiming his wet lands (otherwise worthless) by under-draining, the effects of which already give good evidence that they will soon be worth \$100 per acre and will pay the interest of three times that amount when they are laid down in grass.

SAMUEL ALLEN.

—*American Agriculturist*.

FRESH VS. DECAYED MANURE. M. Koerte, professor at the Royal Academy of Agriculture at Mœglin, in Prussia, made some years ago a series of experiments to ascertain whether it is more economical to use fresh or decayed manure, regard being had to the relative proportion of each. I subjoin the principal results of his experiments. 1. Manure exposed to the influence of the atmosphere, in heaps or layers, continually loses its fertilizing principles, and its bulk diminishes in a corresponding proportion. A hundred loads of fresh dung are reduced at the end of 81 days to 73.3 of its first bulk, or loss of 26.7; 254 days to 62.4 of its first bulk, or loss of 37.6; 384 days to 62.5 of its first bulk, or loss 37.5; 493 days, to 47.9 of its first bulk, or loss of 52.8. 2. The loss was much more considerable in a certain time, at the commencement of its decay, than at after periods of this change, as Gazzeri had previously ascertained. 3. Less loss is sustained when manure is spread in layers on the land, and well pressed, than when in small heaps; so that it is advantageous to spread it in layers on the land, and roll it, when it cannot be immediately plowed into the soil. 4. Although it is impossible to state exactly the loss of bulk of manure when allowed to lie for a long time in the heap, we shall not be far wrong in stating that in common circumstances it is at least one fourth of the whole; so that 100 cart loads are reduced to 75. M. Koerte concludes from his investigations, both on a small and large scale, that it is more advantageous to carry the manure at once, in its fresh state to the land (and this more particularly the case with sheep dung,) than to wait until it has decayed; and this rule should be invariably followed, taking at the same time into consideration the nature of the land.—*Pharmaceutical Times*.

THE NUMBER OF DOGS IN THE UNITED STATES. If it be within the power of those who are to give directions about the next census, we hope they will take measures to ascertain the number of dogs, male and female, in every County in our Union; and, if it could be done, it would be useful also to have a return of the number of sheep killed by dogs. At two cents per day, it is probable that the cost of dogs is

equal to the value of our exports of grain and provisions to England this year; and it is not impossible that our sheep husbandry would add as much more to the wealth of the country, if it were not for fear of having the sheep destroyed by dogs.

We are no enemies of dogs, of genuine blood, kept and used for their legitimate purposes—all such will ever find in us staunch friends and defenders. But we have a great aversion to idle, useless whelps, born only to consume the fruits of the land—whether they go on *four legs or two!*—*The Plow, the Loom, and the Anvil.*

From the Boston Cultivator.

A Good Cow.

MR. EDITOR:—I have found the truth of the maxim, "There is more than one hundred per cent. difference between a good cow and a bad one," as a good cow gives a profit, but a bad one a loss. I take shame to myself when I add, this I might have known long ago, by making the experiment, which I have been led to institute through the reading of the Cultivator and remarks made by your correspondents en passant; which only goes to prove that we do not always practice what we profess. By keeping the milk of three cows separate for a considerable time, and churning the cream also separate, I find I have been doing despite to two of the number, by mixing with their yellow milk that of the third, which produces butter about the color of lard, and somewhat of the same consistency—a sort of greasy concern, you may depend. So instead of averaging their yield, as I have been in the habit of doing, I shall cut off the delinquent, and no longer permit her to cumber the ground and consume the food she has never paid for. And now, having made confession, may I not take the liberty of asking some of my friends how far they have followed up the advice which, like line upon line, and precept upon precept, has been so often held up to their notice in your columns, only to be, like many another piece of good advice, well received, but ill executed. But had the deficiency in the quantity of the milk been half as manifest as in the quality since trial, I should not have so long remained in error, which observation reminds me of the question in your last, by your Fiskeville subscriber, "Whether a cow that is first rate for butter, is always best for cheese also?" and out of which very sensible question, I hope an answer, and to the point, will grow, or be made to follow, from some other of your valuable correspondents. I have to add, I find that my cow of which I complain, gives but three pounds and a half of butter per week, at her best; but let me ask, might she not be a good cheese cow? This I must ascertain, and if so, shall dispose of her to a neighbor who is engaged in cheese dairying. How I wonder we do not always make experiments for ourselves, which has been called "growing facts," you know.

J. SAUNDERS.

Goshen.

A SUBSTITUTE FOR CHARCOAL. The editor of the Poughkeepsie Journal and Eagle, says he has used

corn cobs instead of charcoal for more than a year, and remarks:—"From our experience in the use of cobs, we are convinced they are worth quite as much, bushel for bushel, as the best charcoal; the same quantity will kindle a fire in less time." If this be the case, the use of the substitute will occasion a great saving of expense, and will make in worth the farmer's while to bring this hitherto almost useless article to market.

Pliability without firmness is weakness, firmness without pliability, stupid self-will.

The Markets.

BRIGHTON MARKET, July 26, 1849.

At market, 520 Beef Cattle, 12 pairs Working Oxen, 40 Cows and Calves, 2200 Sheep and 136 Swine.

Prices.—Beef Cattle.—We quote to correspond with last week—Extra, \$6 25; first quality, 5 50 a 6 00; second, 5 00 a 5 50; third, 4 50 a 5 00.

Working Oxen.—No sales noticed.

Cows and Calves.—Sales at \$20, 23, 28, 30, and 33.

Sheep.—Sales at \$2, 2 12, 2 23, 2 50, 2 62 and 2 75.

Swine.—Choice Pigs to peddle at 5 and 6. At retail from 5 1/2 to 7c.—Advertiser.

WOOL. BOSTON, July 29. Wool has been in good demand for fleece during the past week, and a considerable portion of the new clip that had come to market has been taken by manufacturers at about our quoted rates.

Prime Saxony Fleeces, wash'd lb.	40	a	42
American full blood	do	36	a 38
do 3-4	do	33	a 35
do 1-2	do	30	a 32
do 1-4 and com.	do	26	a 28
Extra North'n pulled lamb	do	36	a 38
Super	do	31	a 33
No. 1,	do	28	a 30
No. 2,	do	21	a 23
No. 3,	do	15	a 16
Smynia washed	do	16	a 22
do unwashed	do	8	a 16
Bengasi unwashed	do	7	a 9
Buenos Ayres	do	8	a 20

—Courier.

NEW YORK, July 29. Wool begins to come forward more freely, and is rather accumulating. Holders are, however, firm at last week's quotations, and the tendency we think is upward, notwithstanding the small demand that exists at present.—*Dry Goods Reporter.*

PHILADELPHIA, July 27. WOOL.—Receipts have fallen off and prices are firmer; sales 125,000 lbs. various grades domestic at former rates. The prices paid in the West prevent any decline in the prices obtained here.

LONDON, July 13. WOOL.—The sales are proceeding with considerable briskness, at prices showing, as compared with the last sales, an improvement of from 1d to 2d per lb.—the greater advance being on the good quality.—*Baring's Circular.*

FANEU HALL MARKET.

WHOLESALE.				EGGS, DOZ.			
Beef, fresh, lb.	7	a	14	Apples, barrel,	5 00	a	0 00
Mutton, 1st qual.	6	a	12	Beans, bush,	1 50	a	1 75
2d "	4	a	8	Peas, bushel,	1 00	a	0 00
Lamb, lb.	8	a	12 1/2	Potatoes, barrel,	0 00	a	0 00
Veal, lb.	3	a	8	Onions, bush,	00	a	2 00
Pigs, roasting,	1 00	a	1 22	Honey in comb,	10	a	20
Chickens, pair,	75	a	1 00	SEED.—RETAIL.			
Turkeys, spiced,	1 00	a	1 20	Clover, North. lb.	13	a	14
Geese, mongrel,	1 25	a	1 50	Southern, "	8	a	9
Pigeons, dozen,	1 00	a	1 25	White Dutch,	20	a	25
Pork, per 100 lbs.	6 00	a	6 75	Lucerne, or French,	30	a	33
Lard, best, pr. bbl.	7 00	a	7 50	Herdsgrass, bush.	3 25	a	3 50
Western, keg,	6 50	a	7 00	Red Top, bushel,			
Butter, lump, lb.	18	a	20	Northern,	1 25	a	0 00
do, skrin,	12	a	15	Southern,	65	a	80
Cheese, new milk,	7 1/2	a	8	Orchard Grass,	—	a	2 00
do, four meal,	5	a	6	Fowl Meadow,	2 50	a	0 00

MUTUAL HELP. The race of mankind would perish, did they cease to aid each other. From the time that the mother binds the child's head, until the moment that some kind assistant wipes the deathdamp from the brow of the dying, we cannot exist without mutual help. All, therefore, that need aid, have a right to ask it of their fellow-mortals; no one who holds the power of granting can refuse it without guilt.—*Sir Walter Scott.*

Mr. Lindley, a celebrated London Professor, says, "There is not a single gardener, who is master of his profession, who does not know how highly injurious a high nocturnal temperature is to plants. The coolness of nights is to plants what sleep is to animals." This law may, to some extent, be violated for a time, but the plants cannot, on pain of loss of life, be deprived of their proper periods of repose."

Domestic Economy.

JELLIES FOR THE SICK.

To make *Parada*, or Bread Jelly. Cut a wheaten roll, or loaf, into slices, toast them on both sides, and boil in a quart of water, until the whole forms a jelly, adding more water if required; then strain and flavor with one pound of white sugar, four ounces of red wine, and one ounce of cinnamon. Very nutritious. It may also be made with broth from which the fat has been skimmed, instead of water.

Biscuit Jelly. Take of white biscuit, crushed beneath the rolling-pin, four ounces; cold water, two quarts; soak for some hours, boil to one half, strain, evaporate to one pint, and flavor as above. Given in weakness of the stomach, dysentery, and diarrhœa.

Rice Jelly. Take of rice, three spoons full; boil in water, add ten sweet and five bitter almonds, and sugar to your liking; make into an emulsion, and flavor with cinnamon, or orange-flower water to your taste.

Arrow-root Jelly. Take of arrow root, one ounce; rub to a smooth paste with a spoonful or two of cold water; then gradually add of boiling water, half a pint, stirring all the while. It may be thinned with more water, if desired, and flavored with milk, wine, sugar and spices, according to the palate of the patient.

Sago Jelly. Soak sago in cold water from an hour to an hour and a half; strain and boil in fresh water till it becomes transparent; then add wine, sugar, clear broth, milk, prunes, or spices to flavor. One ounce of sago will make a pint of jelly.

Tapioca Jelly. First, soak, strain and boil the tapioca, as directed above for sago; then flavor with lemon juice and peel, wine, prunes, raisins, or spices. One ounce of tapioca will make a pint of jelly.

NOTE. The flavoring of any of the above named jellies may be omitted or varied, with the advice of a physician.—*Am. Agriculturist.*

LOUISIANA MUFFIN BREAD. Take two pints of flour and one and a half of sifted corn meal, two

spoonfuls of butter, one spoonful of yeast, and two eggs, and mix and bake for breakfast. It's good.

HOPPING JOHNNY (Jambalaya). Take a dressed chicken or full grown fowl, if not old, and cut all the flesh into small pieces with a sharp knife. Put this into an iron pot, with a large spoonful of butter and one onion chopped fine; steep and stir it until it is brown; then add water enough to cover it, and put in some parsley, spices and red pepper pods, chopped fine, and let it boil till you think it is barely done, taking care to stir it often, so as not to burn it; then stir in as much rice, when cooked, as will absorb all the water, which will be one pint of rice to two of water; stir and boil it a minute or so, and then let it stand and simmer until the rice is cooked, and you will have a most delicious dish of palatable, digestible food. S. ROBINSON.

IMPROVEMENT OF BREAD. A $\frac{1}{4}$ oz. of carbonate of magnesia added to the flour, for a 4 lb. loaf, materially improves the quality of the bread, even when made from the worst new seconds flour.—*Professor E. Dery.* This addition is perfectly innocent.

SOAPSTONE GRIDDLES. Understanding that cakes on a soapstone griddle required no fat to keep them from sticking, I brought home one a few days ago, and we prepared to try the experiment. The look of incredulity in the chief cook, at that moment, was amusing; but it was soon turned into one of triumph, for the cakes were turned and taken off as easily as they would have been from the best greased "bake-iron;" and without any fume from burning fat, as in common cases. Besides, the cakes were all nicely browned, and not one burned in the slightest degree. It is true soapstone may be heated red hot, but then the plate is so thick, and heats so slowly, that all danger of burning is easily prevented. In short, we are highly pleased with the purchase, and deem it a great acquisition.

It will be important to keep these griddles very clean, and for this purpose, they may be rubbed occasionally with pumice-stone.—*D. Thomas, in Albany Cultivator.*

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,
and sent to subscribers on the following

TERMS:

For a single copy,	- - - -	50 cents.
5 copies, sent to one address,	- - - -	2 00
10 " " " " "	- - - -	3 00
16 " " " " "	- - - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

PRINTED AT THE CHRONICLE STEAM-PRESS.

SCHOOL JOURNAL AND VERMONT AGRICULTURIST.

Vol. III.

WINDSOR, VT., SEPTEMBER, 1849.

No. 5.

THE SCHOOL JOURNAL.

American Institute of Instruction.

The American Institute of Instruction held its Twentieth Annual Meeting, at Montpelier, commencing on Tuesday morning and continuing till late on Thursday evening, August 14. It was a very full and interesting meeting. Some 450 persons from abroad, with a good number of the citizens of Montpelier, made the meeting quite full almost every hour. And a more eminently pure and intellectual assembly is rarely seen among men. All seemed to have come with elevated aims, and an earnest desire for the well-being of their country. Among them were Bishop Hopkins, President Smith, and Professor Shedd, of Burlington; President Labaree, Professor Eaton, and Mr. Slade, of Middlebury; Rev. Dr. Sears, the successor of Mr. Mann as Secretary of the Massachusetts Board of Education; Mr. Barnard, author of "School Architecture," and the successful agent of school reform in Conn. and Rhode Island; many distinguished teachers from Boston, Providence, and other parts of Massachusetts and Rhode Island; with gentlemen devoted to the cause, from New Hampshire, New York, Ohio, South Carolina,—not to omit the ladies, among whom the Bradford (Mass.) and Mount Holyoke Seminaries had their representatives.

The meeting was called to order at 10 o'clock on Tuesday, by Mr. G. F. Thayer, of Boston, one of the Vice Presidents, who filled the chair during the sessions with characteristic urbanity and tact. On taking the chair he said:—

Citizens of Vermont, Teachers of her Schools, and Friends of Universal Education among her people:

The programme of the present session of the Institute announces that, at the opening, remarks will be made by the President. I exceedingly regret that the absence of the President will deprive us of the advantage of this portion of the exercises of the occasion from him, and devolve on me the duty of becoming his substitute. I regret this for your sakes; I regret it for myself; I regret it for the Institute, and for the cause in which it is engaged. Coming as we do—the most of us—strangers to this region, strangers to your people, it is extremely desirable that we should be introduced by the most able representative of our association; by one the knowledge of whose

name and character, and evidences of whose literary labors and scientific attainments, have preceded him, and which could not fail to give weight to his words, and consequence to the Institution in whose behalf he would speak. While, therefore, it is to be regretted that we cannot have his living presence here to-day, and that his duties are to be performed until the annual election, as best they may, by the humble individual who now addresses you, we rejoice that we can present you, from his pen, now in print, a pretty full account of the "History and Design of the American Institute of Instruction." He tells you, in that, of its origin and plan, of the number of its annual meetings, and gives you a catalogue of many of the lectures, discussions, prize essays, and so forth, which it has given to the cause of human improvement and to the world. He unfolds the potent agency which its members, if enlightened and faithful in their vocation of teachers, exercise in the formation and moulding of the common mind, and hence infers the indispensable necessity of a thorough preparation for that high calling. He invokes all who feel any interest in these objects, to unite with the Institute in carrying forward the measures by which they may be best promoted. These sentiments and exhortations I would now repeat, believing in their truth and importance, and considering our errand among the most momentous that can engage the attention of a human being.

In addition to what has been said by our President, I would say, that almost all the important means for the advancement of common education owe their inception to this Institute. Most of the Teachers' Associations now in operation, State Boards of Education (through which some of the most gifted minds in the country have been brought to bear directly on the schools), Normal Schools, improvement in School-houses, uniformity in class-books, school apparatus, responsibility of School Committees, more adequate compensation of teachers, and, consequently, higher qualifications for their office; these, and many more connected with the great subject, were introduced and discussed by the Institute, again and again, before they became matters of final legislation by our State governments; and when under investigation by legislative committees, their importance and necessity were explained and enforced by our members, who were invited by such committees to express their opinions before them.

For many years the annual meetings were held in Boston; but, it having been thought that a more appropriate sphere of action might be found beyond the metropolis, our Constitution was so amended as to admit of our holding them elsewhere. Accordingly, we have since raised our voice among the spindles of Lowell, the muskets of Springfield, the farms of Worcester, the oil-factories of New Bedford, the hills of Berkshire, and the Pilgrim-relics of Plymouth. We have visited all the New England States but Vermont; and we now come here also—to this youngest daughter of the New England family—hoping both to acquire and to communicate renewed spirit and energy for the prosecution of our high purposes.

We are not unaware that Vermont is awake to the necessity of educating her whole people—not nominally, but *really and thoroughly*; that she has adopted steps to effect this first object of a people's care. We hope and trust that she will go on in this good work, and prove herself to be in education, as she is claimed to be in politics, "the star that never sets"! At the invitation of some her leading minds, we have come among you, to congratulate, to encourage, to assist you. And we doubt not, we doubt not we shall feel, on leaving your green hills, that we have benefited ourselves as much as we may have assisted you.

Although a nation's character and welfare depend upon the quality of its schools, and the value of its schools upon the qualifications of their teachers, the social position of this important class of citizens is not such as to excite, to any considerable degree, the public attention; and hence, this association, composed principally of those engaged in the business of instruction,—although now in its twentieth year—is little known except to those who are, directly or indirectly, connected with school-teaching. For this reason, this introduction has been thought necessary, on visiting a region so remote from its birth-place. We hope, however, that, though we come to you as *strangers*, we shall not fail to part from you as *friends*; that, humble as may be our position in society, our *work* may plead for us, and secure a suitable amount of consideration and regard.

To those who are, like ourselves, engaged in forming or developing the youthful mind, in fixing its principles of action, in subduing its passions, in elevating and refining its affections, and preparing it for its future scenes; and to all who sympathize with us in our labors, and appreciate the difficulties, as well as the important nature, of our calling, we would say: Come, lend us your countenance and aid, listen to our lectures, participate in our discussions, bring in your friends and neighbors, join our association, and thus afford us that evidence of your interest in our object which cannot be mistaken, and which will best secure success in the cause to which we are devoted.

Mr. R. S. HOWARD, of Thetford, briefly responded to the introductory remarks of the President, expressing for himself, personally, the gratification he felt at seeing, for the first time, the American Insti-

tute of Instruction in Vermont. And he was sure that he expressed the feelings of every Vermonter present, when he cordially welcomed the members of the Institute, one and all, to the Green Mountain State. He welcomed them as men, and fellow-citizens of our common country, but more especially did he welcome them, at this time, as the friends of that Free School system of Education which has made New England mainly what she is—the greenest spot in our country, and the admiration of the world. He thanked them for coming up to aid us in this great and good cause. He alluded to the bold and beautiful scenery of our State, and said that we Vermonters sometimes thought—though there might be a little vanity in our saying it—that *Vermont hearts were formed somewhat on the model of Vermont hills*,—on a large and liberal scale,—and with these hearts we welcomed them.

The meeting was opened with prayer by Rev. E. J. Scott, of Montpelier, and on the subsequent mornings by President Labaree, and Mr. Pease of Waterbury.

After some business arrangements, the Introductory Address was delivered, according to the Programme, by Bishop HOPKINS.

SKETCH OF THE ADDRESS.

The subject discussed by Bishop Hopkins was—The Defect of the Principle of Religious Authority in Modern Education. The true principle of education, he remarked, is embraced in the words: "Train up a child in the way he should go, and when he is old he will not depart from it." This includes the knowledge and habits that belong to the Christian religion.

In the arrangements of Divine Providence education is committed to the parent. But in practice, the parent thinks to transfer his responsibility to the Sabbath and the district school, and to do this, too, while retaining in his own hands the parental authority. He might retain that authority, and regard the pastor and the teacher as his assistants only. But the Bible makes the parent responsible; and he cannot rid himself of that responsibility. Will the Almighty accept a contribution of ten or twenty dollars in the shape of school tax and church subscription instead? The pastor is the instructor of parent and child alike; he has obligations and duties of his own. Neither he nor the teacher can relieve the parent of any part of his obligations; they can only aid him; and that is all they undertake.

The training of a child in the way he should go demands the use of authority—the authority of God, of the parent, of the pastor, of the teacher. It is only from the combination of all for the same object, that we can expect the result—that the child will not depart from the way he should go. Nothing can be more preposterous than to cultivate mind, while we neglect that discipline in principle and habit for which authority is necessary.

This error of parents is part of the universal error of the age. Among all the changes that mark the nineteenth century, there is no other so great as that in the use of the word authority. In the times of

our fathers, the power of authority was understood and felt—the authority of God, of the Bible, of the husband, the parent, the pastor, the teacher, the law. Now, the feeling is so different as to tempt us to believe that those perilous times are come, when “men shall be lovers of their own selves, covetous, boasters, proud, blasphemers, disobedient to parents, unthankful, unholy, without natural affection, truce-breakers, false accusers, incontinent, fierce, despisers of those that are good, traitors, heady, high-minded.” Influence has come to be all; authority nothing. The son expects to govern the father; the daughter the mother. The rod of discipline is thrown away, and the scholars govern the schools. Even in the administration of justice, the same spirit leads jurors to follow their own notions in spite of the law; and the sacred bonds of matrimony are coming, in certain quarters, to be despised. Established usage, which our fathers were wont to venerate, is almost regarded as proof of error. The lecturer would by no means be understood to say that there was no good connected with movement. Doubtless some old things that were bad have been done away. But some laws there are that ought to be venerated. Woe to that spirit which rushes on in pursuit of its own devices, regardless of all ancient wisdom and of all legitimate authority.

But there can be small hope of a return to the old rule of scriptural authority. It would not be impossible to teach children to obey; the harder task is to teach parents to govern. The result is, that the teachers of our day are forced into a new responsibility by this defect of parental government. Their task should be regarded with a new feeling of religious obligation; they should meet the responsibility that the times impose. Religious instruction by no means belongs exclusively to pastors. Every man is bound to give it his aid, in all the relations he sustains—the parent, the neighbor, the friend. How then can the teacher be exempted in regard to his school? He need not—he should not teach upon disputed points of religious doctrine. The points of religious agreement among Christians are more, and more important, than the points of difference. [Here the speaker gave an outline of Christian doctrine in regard to which he apposed there was sufficient unanimity—including the authority of the Bible—the omnipresence, omniscience, and holiness of God—our responsibility to God and dependence on him—motives of action—relative duties—the Sabbath—watchfulness—prayer—redemption—the example of Christ—self-control—self-discipline, &c. The sketch was acceptable, we believe, to Christians generally.] In such religious instruction the teacher is safe; and such he ought to give. Not that there should be formal lectures or lessons; but a constant influence—the felt presence of a religious spirit and Christian principle. The influence of home cannot be relied on to effect the object; nor can that of the church. The teacher has at his command nearly six hours in every day of the child's time, and in circumstances the most favorable to religious influence. He has the confidence and respect of the pupil, who feels that he is

regarded with a deep and affectionate interest, and who will reciprocate that regard. True,—the teacher may not have been hired to do this; his contract does not embrace it. He is employed with reference to the child's intellectual culture. But there is another Party to be regarded. Not the parent only, but the Supreme Teacher of mankind has placed the child there at this tender and susceptible age, and to Him must an account be rendered. The vocation of a teacher in a Christian country implies the presence and control of Christian principle. Who ought better to understand all the bearings and relations of his employment? If other means have lost so much of their power, how important that the teacher's efforts should be redoubled; for schools and teachers are the best instrumentality to supply the lamentable departure from the line of Christian duty that has taken place in other quarters.

The speaker attributed the disorders—the outbreaks of wickedness, that startle, agitate and alarm communities, to the want of authority in the family and the school. The foundations of our country were laid in the Gospel; and on that foundation only can our institutions be made permanent. The rapid advancement in knowledge, and in all the arts and forms of industry that adorn the age, is all useful and important; but all is vanity without the presence of higher Christian principle. This strain of remark may be unacceptable to many. In the general whirl and bustle of progress, the general judgment is carried away. Men cease to consider the wants of the soul—the necessity of principle, love, faith, purity—and forget that while all these wonders of activity and thrift may bear us on with extraordinary splendor under the rule of Mammon, the soul's wants can be supplied, and the soul's progress secured only under the government of God.

Among teachers there are a large number of influential minds capable of appreciating the truth on this subject; who know that, do all you can to build up and ornament, without religious principle, and you only prepare a people for vice, outrage and blood. To the school we must look, if we would be saved from the withering influence of infidelity and crime. To the district schools and academies must we look,—that they may furnish well-principled and well-trained youths for the colleges; for in the latter any radical improvement in these respects is too rare to be relied on. To the common school must we look; that the training of the week may become, not as is too often the case, an obstacle, but a valuable auxiliary to the Sabbath-school and the pulpit.

At the close of this address, Mr. GREENLEAF, of Bradford, Mass., who has been a teacher some forty years, rose, and remarked that he had attended most of the meetings of the Institute, and heard most of the lectures that had been delivered before it; but in this were vital truths that had never before been brought forward in the meetings. He should rejoice to have a copy of it placed in every family in New England. A similar impression was made upon the audience generally; and the principles of the ad-

dress were frequently alluded to in the subsequent discussions with lively interest. This closed the morning session.

TUESDAY, P. M.

SUBJECT OF THE MORNING LECTURE.

Mr. FIELD, of Boston, made some remarks on the importance of authority in schools, and the value of the views presented by Bishop Hopkins. He would be glad to have them formally sanctioned by the Institute. Let such views prevail, and there would be less trouble in governing schools. The greatest difficulty that he had met with was that of getting parents practically to acknowledge the paramount authority of the teacher. As had been remarked, there was a notion prevalent that the school must always be acceptable to the child. That notion assumes what is not true,—that the child will of course be pleased with what is best for him.

Mr. HENRY, of New York, thought the best means of government was, to have its appropriate duty for every half hour of the child's time, so as to leave place for no idle moments.

Mr. GREENLEAF, of Bradford. Teachers suffer greatly from the bad conduct of parents, who send in their orders about the management of the school. Very little deference should be paid to such orders; or to men who will have you get along on the principle of moral suasion, as they call it. He would let moral suasion have its perfect work. But on that declared principle solely, we cannot get along in peace; some mark of affection upon a refractory boy's back will sometimes be demanded; and among all his pupils, those had given him the most evident proofs of gratitude, to whom he had been faithful in this respect.

Rev. DARIUS FORBES made a few remarks on the importance of religious influence. We should employ only religious teachers.

Mr. CHAMBERLAIN, of the State of New York. Mr. Forbes had not gone far enough. As practical teachers we know that most of our difficulties arise from a want of reverence for *authority*. Order cannot be maintained by mere *advice*—moral suasion, or whatever you call it; the advice must come from *authority*. As to teachers, we must take such as we can get.

Mr. FORBES. There is no want want of good material for teachers. Does not this whole matter of authority depend on religious instruction? Want of reverence is the source of lawlessness.

LECTURE BY PROF. W. G. T. SHEDD, OF BURLINGTON.

Professor SHEDD commenced his Lecture on Liberal Education a part of a State System, by some remarks on the nature of knowledge—of that which Education proposes to impart. Essential knowledge is a knowledge of fundamental truth, by which, when become popular and part of the common intelligence, the business of life is carried on. Everything depends on fundamental principles. There is a great amount of information in regard to civil and judicial affairs among the people of this community,—information adequate to the business of life. But this does

not imply in all a knowledge of principles; they are the study of a profession. There prevails a degree of knowledge of God and of our relation to him, sufficient for the guidance of every man; but this does not preclude the necessity of a class of men whose business it is to study and develop a higher knowledge, a knowledge of principles; hence we have Pastors and Teachers. So in all the departments of human life; beneath the manifold uses and appliances of knowledge, lie fundamental truths. And with this lower region of truth, the popular mind must in some way have communion, or it will go backward in regard to the most common information and most practical of all uses. Floating information, now so general, so useful, so reliable, will become powerless and be lost, unless sustained by direct reference to its ground in science. For the business and the duties of life,—for improvement in art, for safety in social movements and in every employment and relation, we need, not men skilled in business merely, but the Watts, the Newtons, the Luthers.

Colleges are institutions for keeping up this living connection of science with the knowledge of practical life. And it is done:

1. By not suffering the distinction between popular knowledge and science to be lost sight of. In our theory of education the future citizen is to be in the common school at the age when, as the memory and imagination are active, he should be employed in various acquisitions of knowledge of direct use in every position in life. In college he is led to the knowledge of principles; and colleges thus become a standing evidence of the distinction between science and practical knowledge. The college gives the student the power of first truths; it has the mind itself in its eye. What is called useful knowledge is not the only knowledge that is useful. When anything is to be done in fundamentals, then the fundamental, the scientific, is the practical and the useful. Unless the popular movement is kept alive by the higher education, it dies. So it was when, in Greece, education passed into the hands of the sophists—of men of no science, but knowing many things. The same would happen now. The whole mass of popular information would crumble away like a noble ship struck by the rot. Popular information is made up of rays shot from a ball of solid fire; it has been distilling for ages from the alembic of the scholar's brain. The present is the result of all the past. The difference between the British and Spanish colonies on this continent may be attributed to the fact that, in the former, the popular knowledge has kept its intimate connection with thorough science.

2. By constantly sending out into society professional men. Professional power and influence is based on scientific distinction from popular knowledge. The professions are the growth of the colleges, and modern society cannot be kept in progress without them. What would be the state of things were the three sciences of Law, Medicine and Theology to be put out among us? It is the physician's business to study life and material nature, with reference to diseases, &c.; and by his means there goes

into circulation a vast amount of knowledge, useful in a thousand ways in common life. How often does such knowledge banish superstitious and groundless fears, and how certainly would a little of it have saved our fathers from the delusion of what has been called the Salem witchcraft! No such excitement could be got up now; the studies of physicians have rendered it impossible. The science of Law has a close affinity with religion. Justice, which is the substance and staple of legal science, is the most fundamental of all fundamentals. Even mercy itself is made to show itself mercy, and to exhibit its highest quality, when the flame of the law blazes upon its object. By cherishing a reverence for human law we are prepared to reverence the Divine. Hence it is that the study of the science of law, by diffusing a sentiment of reverence in regard to its grounds and highest dictates, becomes so important for the well-being of society. The third of the scientific professions, that of theology, is devoted to truths that reach the depths of the human soul—to man's eternal being—to the bonds that connect all the universe together, and to God. It is therefore the most important of all sciences; and in the Divine plan of being, runs through all else of science, of action, and of hope. And in proportion to its importance is the opportunity given to it by Divine appointment among men. Say what we will of the power of the press, or of any other agency on earth, there is nothing to be compared for influence, not in moral only, but in intellectual respects, with the Sabbath and its teachings—with its thousands of preachers and millions of hearers, engaged for one day in every seven, in the earnest contemplation of great, searching, absorbing truths.—What would society be—what would be the state of intellect and of knowledge, without the scientific studies, with their popular results, of the doctor, the lawyer, and the minister!

It is no less true of all the other employments of human life, that they ought to rest on the like basis of scientific knowledge; and that basis they will the more amply enjoy, as the means of scientific culture by an education at College comes within the more easy reach of greater numbers of our youth.

Colleges then are not an accidental thing, but a necessary and organic part of state institutions. The true well-being of the commonwealth depends upon them. The Puritan Fathers of our Colleges knew it to be so; and the Colleges have done for the country what was expected of them.

After a few remarks by Mr. WETHERALL of New-York, on the Lecture, the Institute resumed the usual the subject of

AUTHORITY IN SCHOOL.

Mr. MORSE, of Nantucket. Doubtless authority is indispensable to the prosperity of a school. The question of questions is—How shall authority be sustained! For himself, his practice had undergone an essential change. He commenced whipping and teaching twenty years ago in the way then common about 25 miles north of Montpelier. He whipped his way south into Massachusetts, tried it there a year,

and then passed over into Nantucket, where, for the last twelve years, he had done without it. For the last ten years, in a school of more than one hundred scholars, he had got along without it. It is the teacher's business to take the child, bad as he may be, and prepare him for all his future. If there is evil in the soul, the teacher should labor to eradicate it. The duties are not reciprocal; it is the teacher's business to enlighten all sorts of ignorance and correct all sorts of perversity. He was convinced that, if the teacher was perfect master of himself, he could do best without the use of the rod. He was sorry to hear gentlemen speak of using the rod with apparent zest, as if they liked it.

Mr. GREENLEAF, of Bradford, was sorry to be misunderstood. He had said expressly that moral suasion should have its perfect work. The gentleman from Nantucket had advanced just the sentiments which he had always held. He had said something about love-pats; he meant it in the true sense—real tokens of faithful love. In his first endeavors he whipped far more than recently; and one-ninth part of the whipping he had done in his life would have been better than the whole. But what would you do with such an one as Richard Crowninshield, whom he had the honor to educate! For the last fifteen years, he had not resorted to the rod; he had said to those who would not mind, that he and they could not occupy the same room.

Mr. MORSE, in reply to questions by Mr. SWAN, of Boston:—Has refractory boys. A mode of punishment which he has found effectual, is this: The disobedient child is called forward, and made to occupy a chair in front of the school, and with his back towards the scholars, and left to reflect on when he has done. Has sometimes kept a child on that seat three successive half days, but in the end they "come to." Should a child refuse to come forward, or to obey any other direct command, it would be a new case—he should have to devise a plan at the moment. He might use physical force, but not the rod. Would put him in a room alone.

Mr. SWAN. It is part of a teacher's duty to say, you must—to use the imperative. Shutting children up in rooms will not do. He uses the rod; but in twenty-one years' experience has never sent away a child angry with him after being whipped. It must be done with proper feelings. The discussion of this subject in the Institute had done great good. A few years ago, it was the fashion to ask the poor candidate for employment as a teacher, How do you get along with government? and the trembling answer must be, Chiefly by moral suasion. Discussion has changed public opinion.

Mr. GREEN, of Boston. Should the pupil be obliged always to mind! He thought so. This should be our starting point. It is the teacher's right, and sometimes his duty, to say—You shall; but never the right of the pupil to say—I won't; and every child knows it. The objector places the two on the same ground, and puts both, therefore, in a false position.

Mr. MORSE would ask a question in his turn.—Suppose you have whipped a child as long as you dare—till you fear for the child's life—and yet without securing obedience. What would the gentleman from Boston do?

Mr. SWAN. Would rest; would say,—I will attend to you again. He never had occasion to give the second lesson.

Mr. FIELD. We are placed in different circumstances. The gentleman from Nantucket has age and experience. The young and inexperienced cannot do what he can. Mr. F. has been able for four years to conduct his large school (400) without having a blow struck in any of the rooms. For seven years he has not had occasion to use the rod. But his views of the necessity of resorting to it when circumstances require, are the same as ever. He once took charge of a disorderly school of 240 boys where he was obliged to make an example of 19 or 15 of the leaders of disorder the first day. It was a mob; he was obliged to put it down. The fact that an individual in some circumstances can succeed without the rod, by no means proves that even he could do it in other circumstances; much less, that another could. He had been on trial three days before the School Committee of Boston on the ground that his cruelty to the children disqualified him to have charge of a school. He was acquitted, even by his accusers themselves; and when the facts occurred which gave rise to the objection, his views were the same as now, when he does not use the rod at all.

TUESDAY EVENING.

Mr. HENRY of New York thought the impression might be made that they were in favor of using the rod too much—of carrying it with a strong hand.—There was little disposition to use the rod; but they were generally agreed that it was legitimate, and sometimes necessary. The tendency of the age is to dispense with force.

Mr. NORTHERD of Salem. The necessity of using the rod decreases in proportion to experience and acquaintance with the particular school. We ought not so to treat the subject as to mislead young and inexperienced teachers. The rod is not much used in Massachusetts, and yet most teachers feel the necessity of retaining it. The teacher should exhibit the kindest feelings in punishing; the punishment should be one of love, not of anger.

Mr. GREENLEAF, of Brooklyn, N. Y., was afraid the discussion had made an *erroneous* impression; those Boston fellows, he had heard it remarked, are real hard-heads. He was sorry. The truth is, that such phrases as *You shall, You shan't*, are not used in school. Teachers take it more smoothly; John, please pass me that book. It means just as much as, Give me that book, if you know what is good for yourself; and John understands it so. The rod was regarded as one of many means of governing; it had its place, in which there was nothing that could do as well. As to his own experience, he at first used the rod too much. Afterwards he went into the moral suasion business till he had nothing else in the school. He now takes a middle course.

Mr. TUFTS, of Wardsboro. In regard to *principles* we agree. It is characteristic of quackery to use only one medicine. There is quackery about discipline. Some will have nothing but catnip tea, whatever may be the case; another is always dosing with calomel. He did not like the idea of the strong measures—the calomel—as a *last resort*. Sometimes they should be the first. He has been in schools where nothing could be done before whipping.

Mr. GREENLEAF, of Bradford, would be very sorry to have an impression go abroad that he and others were in the habit of flogging. Few do it less than he has. The Boston teachers do little of it. He can testify to their humanity.

Here the discussion closed, the hour having arrived for the

LECTURE BY PRESIDENT LABAREE, OF MIDDLEBURY.

Subject: The Education demanded by the peculiar character of our Institutions.

The Lecturer remarked that different views of the meaning of the term education prevailed. He should use it in such a manner as to embrace them all. It might be regarded as embracing the subjective,—the forming of the man, physically, intellectually, and morally; and the objective, preparing him for business and duty.

Systems of education differ according to the character of governments. In the old republics, youth were educated for the State; and the training of our children must be adapted to our institutions; we must have in view the duties to which they *must* be called, and what they *may* become. If they do not occupy the high places of power themselves, they will determine who shall do it. What then is the education proper for our youth?

1. Our youth should be inspired with large and liberal views. The employments and modes of life that prevail in different parts of our country are calculated to foster mutual prejudices and antipathies in persons of narrow views. Even in the same community, our institutions give freedom to conflicting views of politics, religion, &c. Foreigners are coming in among us in vast multitudes, with their peculiar views and modes of life. In all these respects it is important to cultivate a generous and liberal spirit,—in order to harmony and good feeling among ourselves, and that the foreign elements may be the more happily assimilated. And not only this:—we have relations to the whole world, and exert an influence upon distant nations. Our history from the landing at Plymouth to this day, constitutes a phenomenon that attracts all observers, and must affect the destiny of countless millions. Where among such a people shall we find a place for men of narrow views and sympathies?

2. The power of discrimination in our youth should be carefully cultivated. They must be made quick to distinguish the true from the false; and to find the true medium between the Phæton-like reformer and the blind conservative. A thousand theological, medical and political errors agitate the public mind, and gain currency, not because the human mind loves error, but because error is connected with brilliant fragments of truth; which, out of their proper connections and

relations, are like false lights to the storm-tossed mariner. We must therefore have divines, lawyers, physicians, teachers—we must have a *people* taught to discriminate.

3. True intellectual and moral independence.—False independence is often mistaken for the true, and our institutions peculiarly expose us to error in this respect. Instead of cherishing that manly adherence to principle and moral firmness which belong to true independence, our youth are in danger of disregarding legitimate authority, in the family and the school. Our circumstances demand that the laws, and all legitimate authority, should be upheld by an army of men of well-principled independence.

4. A deeply settled conviction of the paramount importance of religious principle. Mere knowledge, however great and however diffused, will never sustain us in our progress or preserve us from ruin.—Here the lecturer quoted the language of Washington and of De Toqueville in regard to the necessity of religious principles, and referred to the history of Greece, Rome, the Italian republics, France, Scotland, &c., in confirmation of his views; and closed with a very earnest appeal upon this fourth topic. The lecture evidently made a deep impression upon the crowded audience, and at its close there were some tokens of applause, which were promptly checked by the President, as not appropriate to such meetings, or to a lecture of such weight and seriousness. After a few remarks by Mr. Henry, of New York, the Institute adjourned.

WEDNESDAY MORNING.

HISTORY OF EDUCATION.

After prayer by President LABAREE, Mr. NORTHEND remarked that Mr. BARNARD, late Commissioner of Common Schools in Rhode Island, was engaged in preparing a history of education, especially in New England, and moved the appointment of a committee to confer with him on the subject; and Messrs. Northend, Howard, Sanborn of Dartmouth College, Jenner of New York, and Green of Boston, were appointed as such committee. The committee afterwards reported resolutions, expressing the interest of the Institute in the undertaking, and proffering to Mr. Barnard every assistance in its power; which were adopted.

PRESIDENT LABAREE'S LECTURE.

Professor SANBORN thought it an important question whether there is any conservative power in intellectual culture. The lecture of last evening seemed to him hardly correct in this respect. He believed that there was more of power in intellectual culture and in knowledge, to elevate and preserve a people, than the lecturer seemed to admit. All culture tends to elevate men. Intellectual culture gives self-respect; and in Christian lands it involves more or less of moral culture, whether any special attention is given to it or not. Its tendency, therefore, must be to prevent crime, and promote good behavior. We should be cautious in our statements on this subject, lest we discourage effort to promote the diffusion of knowledge. Professor S. discussed at some length

the historical argument adduced by the lecturer, maintaining that the ruin of states and nations referred to should be attributed, not to the exclusive culture of the intellect, but to other causes, and chiefly to the accumulation of property in the hands of a few, so that there were a few lordly proprietors, and for the rest, instead of intelligent and independent freeholders, millions of slaves and starving laborers.

At nine o'clock, Mr. WILLIAM O. AYRES, of Boston, delivered a lecture on

THE CLAIMS OF NATURAL HISTORY AS A BRANCH OF COMMON SCHOOL EDUCATION.

Mr. AYRES discussed the influence of the study of Natural History on the individual—the benefits resulting from it to society—and the duty of becoming acquainted with the works of God.

After the lecture, the subject being open for debate, Prof. EATON, of Middlebury, in answer to a call from some gentlemen, expressed his pleasure in having the subject brought forward. The study of Natural History, he believes, is too much neglected; but there are difficulties in introducing it into our Common Schools. Some efforts have been made here, but they were a failure. Our teachers are not prepared, and look upon it with coldness. The difficulty originates in the higher institutions. From them must our Common School studies take their tone. Natural History is neglected in our Colleges. He was glad to know that the subject was attracting more attention in some of them. Professor SHEDD had omitted, in his able lecture, one particular in regard to the position of our Colleges—they furnish the teachers of our Academies, and determine the character of our Common School instruction. Through that channel only can a more correct practice in regard to branches of study be brought about. There is a responsibility, in this respect, resting upon the Colleges; a responsibility also with the people, whose wishes, made known with becoming earnestness, will secure any object of the kind.

WEDNESDAY AFTERNOON.

The annual reports of the Treasurer and the censors were laid before the Institute. The Directors were authorized to take measures to procure the appropriation of \$300 which the Institute has received annually for ten years from the Legislature of Massachusetts.

LECTURE BY MR. WILLIAM C. GOLDTHWAITE, OF WESTFIELD, MASS.

Subject: Practical Education. No such brief account of it as we have room for can give the reader any conception of this brilliant and impressive lecture. A proposal was made to print and circulate thousands of copies; and one gentleman, who did not hear it, remarked that if it was *half as good* as one that he had before heard from Mr. G., he should rejoice to have it thus circulated. The subject was referred to the Directors.

In his introductory remarks, Mr. Goldthwaite commented with great severity upon the practice of using

books prepared with questions, Keys, &c.—books, he remarked, contrived on the presumption that to save the child from the necessity of labor, is the best thing that can be done for him. The prime object of education—to teach the child how to learn—is lost sight of. Miserable helpers are all such. If used at all, it should be as the eagle uses the wind—commanding or breasting its power as may best help him to his far-seen eyrie.

Mr. G. would not speak of physical, or even of moral training; but only of the teacher's work as the intellectual guide of the young. In this view of his work, the teacher must have before him the immortal being of his pupil, remembering that he is one who must act his part in the business of life, and live forever. The relations of the present must be sustained by considerations drawn from the future. Architects are ye, rearing a structure through which may reverberate forever and ever the music of Heaven.—We are more than teachers and educators; we are sponsors and god-fathers; we give pledges for the child's progress, and that the republic of letters, our common country, and the great world which has a claim upon the talents, and influence, and gold of all, shall not suffer detriment from our errors, or our neglect to give a discipline of a thorough, practical, effective kind. Man was not made for the earth, but the earth for man; and by education we put man in possession of this inheritance. We make the strong rude clown, a prince. To the uneducated, man seems a plaything of the world—of the seasons—of chance events; by education the world is made to us a gymnasium, in which to exercise and develop, by the use of all created things, the powers that God has given us. Education finds man an insect, crawling upon the earth, and makes him a winged seraph that soars above it.

A Practical Education includes,

1. Sound intellectual training. To suppose that the object is to fill the mind with knowledge, is a fundamental mistake—the heresy of all heresies in intellectual training. The business of the teacher is, to discipline and develop the God-given powers committed to his care. This is not done by storing the mind with the knowledge of things, but by teaching it to work. Your pupil should not be allowed to proceed without constructing his own rules. It is by labor that we become strong. Do you make the oak grow by hanging garlands upon its trunk? The oak grows—and so do human souls. Give the child the power of thought, and nothing can keep him from knowledge; the strong branches and bright green leaves will burst out on every side—a garment of beauty forever.

Intellectual employments are various—some for discipline, some for ornament, some for information. They should be used according to the pupil's wants. But always must we knock with the battle-axe of truth, till we can rely on the pupil's keeping awake.

2. A practical education implies learning. Large stores of knowledge may be acquired in the process of discipline—an object that should always be distinctly before the teacher's mind. The young awak-

ened mind thirsts for knowledge. It is sought for its own sweet sake. The teacher must lose no opportunity to pour it in.

3. The power of expression. It is of comparatively little use to know, if you cannot express. Without that power, and the use of it, the mind becomes a Dead Sea. It is painful to go into a school where the children say they know, but cannot tell. They are full charged with precious knowledge, but it can come out only as their own teacher dexterously manages the discharging rod. The fact is, they do not know. If they knew, they could tell. The attempt to tell is a test of knowledge. Their speech betrays the ignorant. There is so little attention paid to the power of expression, that almost every other man wants some talking Aaron spliced on to him, in order that he may be a complete man. Teachers take great pains to get knowledge into the head, but pay very little regard to the means of its getting out again.

But the power of easy expression is necessary for every man's happiness. Men sometimes feel the desire of utterance as a very fire in their bones. It is an instinct and a duty to reproduce ourselves and impress our image upon the receptive material around us. The part we are to act in the drama of life demands this power.

To cultivate this power, we must aim at it directly. We must teach not only to think, but to utter and express what we know. And there is no better discipline in regard to thinking, than the endeavor to express our thoughts. It gives them definiteness and continuity. In teaching, it is not enough to inculcate truth, and gain an assurance from the pupil that he understands. Perhaps he does not know what it is to understand. Make him express it—convey it—illustrate it in his own language, and in precise terms. So doing we secure permanent and abiding knowledge, and knowledge available at every moment. The power of ready and easy expression thus acquired is a most beautiful ornament to the school room; it is often what the lustre is to the star—the polish to the diamond. The mind, remember, should not be a chest, merely to hold what you put in it; but a mint, to coin the bullion into beautiful currency bearing its own impress.

3. A refined taste. If any should wonder why this is regarded as one of the leading characteristics of a practical education, let him ask himself what is so really practical as that which is good—what so truly utilitarian as that which makes us better and happier here, and allies itself with blessedness hereafter. As means for the cultivation of taste, we have the legacies of mighty poets, full of the gems of thought, set in all manner of curious work. Let the pupil study these, and commit them to memory,—an exercise sadly too much neglected in our time. Open his eyes upon the earth, and teach him to see it, not as a mere workshop where wretched men work and toil, but as a beautiful temple of God, adorned like that on Mount Zion,—as putting on in spring the dress of a bride breathing inexpressible beauty and joy; and in autumn that of a dying saint, ready to go

up in clouds of glory to join the songs of waiting angels. Lead him forth into nature, as to a perpetual lesson, and the means at once of delight and of discipline appointed by God.

Perhaps the subject announced for this Lecture, may have awakened expectations of a different train of thought. Different notions of what constitutes a practical education are abroad. But are not the particulars specified those which go to make man practically what he should be—to make him earnest, strong, reliable, efficient,—one prepared to estimate, to do, and to enjoy, the special work to which he is called, whatever it may be!

MR. PALMER'S LECTURE.

At three o'clock a Lecture was delivered by Mr. THOMAS H. PALMER, of Pittsford, on the *Essentials of Education*.

To the question, What are the essentials of a good education, Mr. PALMER would answer—

1. *Reading.* Reading is either artificial or intellectual. The former is only a ready and correct utterance of language as written; the latter implies attention to the author's meaning. This may be with or without vocal reading. It confers power over our whole literature and all the resources of science. To which of these, Mr. Palmer asked, do our teachers generally devote their energies? How often is it that the art of reading is a merely nominal advantage! The difficulty is not so much that the words are not understood, as in the want of attention—of the power of concentration. The reader's eye runs over a chapter of the Bible, the meaning of which there is no difficulty about, and yet he is unable, when he is done, to recall a word of it. His thoughts have been to the ends of the earth. To prevent this, the habit of inattention must be guarded against from the first. Constant effort must be made to cultivate the power of concentrating the mind upon the single present employment. Most teachers do something in this way, but very inadequately. It is not enough to put a question to the class—each individual must be put to the test, and especial care taken with such as are deficient in attention. In regard to this, the want of time is no excuse. If there is time for nothing else, there must be time for this essential and fundamental discipline, the foundation of all progress and of all excellence. At first, the questioning should be very minute; the wandering thought should be recalled every moment. Where this is thoroughly done, it will not be necessary to continue it long. The questions should gradually become more general and less frequent. They should be laid aside as fast as possible, but never without knowing that the object has been accomplished.

2. *Listening.* To listen with attention is hardly less important than to read with attention. Look at a congregation on the Sabbath, or at a jury in the court room. Are they able to listen with due attention for successive hours? He that has such command of his thoughts as to listen, has fought the great battle of life. To cultivate this power, let the teacher, or one of the scholars, read, and the hearers

be required to give an account of what is read. Begin with easy tasks, and proceed gradually to harder ones. The reading of the Scriptures at the opening of school furnishes a good occasion for this exercise, in connection with the most important lessons.

3. *Reasoning.* The exercise of the reasoning faculties must be commenced early. The *why?* must always follow the *what?* Simply to repeat the reasonings of others, differs little from any other act of memory. Children must be taught to give their own reasons.

4. *The cultivation of the conscience.* This is a favorite topic with Mr. Palmer, and his views are before the public in a Prize Essay, and in his Moral Instructor. The appeal to the conscience invigorates the powers of attention, comparison, judgment, &c. The conscience may be appealed to at the earliest age. When the question of right and wrong is fairly before the child's mind, the answer of the youngest will be the quickest and best. Great care is necessary in regard to the motives addressed to the child, and incalculable harm is done by the use of such as are base. In cultivating the conscience, no other truths are of such power as our accountability to God and his Omnipresence.

DISCUSSION.

After a short recess, Mr. BROOKS, of Boston, made some remarks on the importance of perfect accuracy and thoroughness in teaching. If you find an error in the child's mind, follow it up till he is rid of it.—If a word is spelled wrong, be sure that the class is right before it is dismissed. Repeat, and fix attention on the exact error, till it can never be committed again. One clear and distinct idea is worth a world of misty ones. Time is of no consequence in comparison with the object. Give the child full possession of one clear, distinct truth, and it becomes to him a centre of light. In all your teaching—no matter what time it takes—never leave your pupil till you know he has in his mind your exact thought.

President LARABEE made some remarks in regard to the decided progress that had been made in Common Schools in this State since he was first a teacher, 32 years ago; and on the importance of correct training at the outset. Habits of bad spelling, for instance, are not corrected in College; if correct spelling is not learned in the common school, the acquirement is never made. President L. gave some amusing illustrations of the results of inattention and careless teaching.

Remarks were also made by Mr. GREENLEAF of Brooklyn, N. Y., Mr. MARSH of Groton, Mass., and Mr. BATCHELDER of Lyon, Mass.

Mr. BARNARD, of Hartford, Conn., could parallel, from his own observation in Connecticut, Rhode Island and Massachusetts, any specimens of wretched school-houses and bad schools that could be found in Vermont. The common schools of New England are very nearly on a level, except that some of the large cities and towns are in advance of the more rural districts. Every where we find bad school houses by the roadside—children of all ages and stages of progress under the same teacher—irregular attend-

ance—a poor supply of books and apparatus; most of the teachers are young, and have had little instruction in their work. In regard to new studies, natural history, &c., they do infinite mischief, if introduced without first teaching the teachers to do accurately and thoroughly all they undertake.

As there was a little time, on motion of Mr. Barnard, Mr. SHATTUCK of Cincinnati was invited to make some remarks upon teaching drawing in Common Schools. It is for the advantage, Mr. S. said, of every farmer to have his children taught to draw. If any building is to be done, the farmer wants drawings which he can look at and amend, so as to get every thing right before he begins. In France and Germany, drawing schools are supported by government. The result was, that the English manufacturers were losing their market for certain kinds of goods, and compelled to petition government for protection,—protection, not by revenue laws, but by establishing similar schools of design, of which there are now 36 in the British Islands. Our schools might be used for the like purpose. Without much or indeed any skill, the teacher of a common school may do much in this way, beginning with the slate and blackboard, perpendicular and horizontal lines, &c., and gradually proceeding to the use of cards and books. It furnishes pleasant employment for the children, and cultivates the eye, the hand, the taste, and habits of accurate observation.

WEDNESDAY EVENING.

PROFESSOR SANBORN'S LECTURE.

After the transaction of some business, and remarks by Messrs. Greenleaf of Bradford, Tufts, and Brooks, Professor SANBORN, of Dartmouth College, delivered a Lecture on Education as the Condition of National Greatness.

THURSDAY MORNING.

After prayer by Mr. Pease of Waterbury, the Rev. Dr. SEARS, Secretary of the Massachusetts Board of Education, delivered a Lecture on the Uses of the Imagination in Schools and in Real Life.

LECTURE BY DR. SEARS.

For the present discussion, Dr. Sears remarked, the powers of the human mind may be regarded as consisting of the perceptive faculties, the sensibilities, memory, imagination, and understanding. Some of these demand more culture than others; some are developed earlier than others. Perhaps the above arrangement is nearly in the order of their development—the perceptive first, the reasoning powers last; the sensibilities, memory, and imagination, more nearly contemporaneous.

A knowledge of the mind is necessary for the practical business of education. In the middle ages, mind was studied, but not with reference to this subject. The result was, a disproportioned attention to particular faculties, and the neglect of others at the time when they ought to receive most attention.—A practical knowledge of the mind with reference to education, is of slow growth. Rousseau, whose

influence upon methods has been greater than that of any other man, saw the errors of the old system, but plunged into others not less serious. The conflict since carried on has extended our field of observation, and is preparing the way for a well-grounded system.

The hastening of a child into the school-room when he belongs to the nursery, retards, rather than hastens ultimate progress. We must no more begin too early than defer too long. Instead of cramming the mind with knowledge, there should be given time and facilities for the imagination to work. It is impossible for the mind to master all knowledge in youth.—We must economize; we must select more with reference to the mind than to what are called practical uses—the discipline of the mind being the most practical of all objects in youth. The multiplicity of studies in our schools is one of the greatest evils of the age. There is not only a pernicious crowding for want of time, but the knowledge obtained is of bad quality. The science of the primers is not worth the paper; there is nothing rich and productive in it.

The mind is of slow growth, and should be detained long on this middle process, while the imagination is in process of development. And the imagination, as well as the other powers, should be employed on some few great subjects. Nor should its operations be interfered with, or its culture neglected, by tasking too early the reasoning powers. In this respect, there is truth in the proverb—"More than a boy at sixteen—less than a man at thirty."—It is characteristic of our country, and of the times, that we shorten the season of youth. The boy should be kept long in the period of his boyhood; the development should be retarded, the tendency to the higher efforts of his mind rather repressed, so that, when the time arrives, the strong vegetation within shall burst forth with double vigor. These years of boyhood are the season for cultivating the imagination, and gathering copious materials for the mind's future use. It is impossible, said a distinguished European educator, it is impossible that a boy should be fit for business at sixteen.

Memory in early times had a disproportionate degree of attention. Now, the tendency is to undervalue it. Every great mind has a powerful memory. As we learn to reason, we learn to group and classify; which is the best means of memory. Thus the power of memory is increased in proportion as it is exercised in connection with other faculties.

The understanding is but feebly developed at first, and grows slowly. There is great danger in pushing it too fast. It must first have material,—must not be driven to grind without grist. Yet in this earlier season it is not by any means to be neglected. Cultivate what power you may, you must in the process exercise the understanding. It is best cultivated at this period by the practice of nice observation, and by attention to the arrangement and relations of facts.

Dr. Sears remarked that there is no one word in our language to designate what he means by imagination:—the power which the mind has of representing to itself, in a pictorial way, any or all the things of

which it has taken cognizance, and also the power of grouping them as it pleases:—the picture-making faculty.

In school, we should begin the exercise of this power with the first lessons. Find whether the thing read by the child has impressed itself distinctly on his mind. Always make that a distinct object with every lesson. History is generally regarded as one of the most difficult branches in which to secure interest in schools, and the study of it is often abandoned for want of power to awaken interest. The difficulty is in the method; in a failure to give the imagination its proper part to act. To make lessons in history interesting to the young, and to make them valuable, attention must be chiefly devoted, not to chronological and dry recitals of wars and what are called political changes, but to such individual characters and such views of society and manners as exercise the imagination. History is but the extension over time and space, of one's own experience, by the aid of other observers. We cannot ourselves visit all countries and live in all time. The best we can do is to use, in respect to the past, the eyes and the ears of others, so far as we can, in the way of substitute for our own personal presence. This is the view of history that should be taken when we instruct the young; those points in history should be seized upon which would interest the pupil if transpiring before him, and which may therefore employ his imagination. Some dates are necessary; but an outline of history is only a map, and the drier of all dry books to a child. He wants, for instance, individual characters—to become acquainted with men, from childhood up. And in general, in regard to history, there is a vast amount of time lost in attempting to grasp the whole. He is the safe historical reasoner who has thoroughly studied two or three countries, so as to understand their life and spirit. For him compends will answer in regard to other countries; he can understand them by the help of a few facts.

Reading must ever constitute the substance of common school education. The reading book educates the child, more than any other; it extends his knowledge, disciplines his mind, excites his imagination, cultivates his taste. But in order to do this to the best advantage, the book must be used as a classic,—and with some definite purpose other than learning to read properly. The same piece may be read over and over, each time for a different purpose, and thus appear new at every fresh reading. But for this purpose the books must be indeed books; and the piece must be read with sympathy—sympathy, whether in logic, or passion, or imagination. In regard to a descriptive piece, the reader must be in a mental condition to paint the scene. Nine-tenths of the reading done is wasted for want of this vivid mental sympathy; the image is not in the reader's mind—the imagination has not been cultivated; and the loss in rational enjoyment is beyond all estimate.

In the study of Geography, it is hardly possible to express the importance of the imagination. Success necessarily depends on the exercise of this faculty. Of the two plans, it is better to begin with a general

knowledge of the globe; for if you begin with your school-room, your town, &c., and proceed thence to more general views, as some recommend, there must always be more or less of error in the early steps, to be corrected afterwards. In teaching geography you have the marvellous, the vast, and the strange; which the child dearly loves, and among which you may give his imagination a wide range. General views of extent are best at the beginning; leave the exact number of miles, &c., for a subsequent period, and most of the names of places, &c., that now occupy so much time, to some occasion when the knowledge is wanted for some use. After the general views, take the class in imagination to some small spot, and dwell upon it till they see it, as it were, by the bodily eye. By thus mastering one little spot, the imagination will be disciplined, and habits formed that will be worth more than all riches. For this purpose the teacher must have access to other books than the one used by the class. Let him resort to poetic descriptions, travels, sea captains, guide books, and squeeze juice enough out of some of them to moisten the otherwise dry lesson over which the child has been poring.

Not only in the process of education, but in all the occupations and intercourse of life, the imagination has its important place. It is thought that, because they will spend a year or half a life-time, in the elucidation of some obscure particular of ancient manners, the Germans must be a dull, plodding race. It is just the opposite. It is the strong, lively imagination that makes them such earnest seekers after particulars. They are exhuming all antiquity; they are willing to toil for whatever may go towards completing the picture that their imagination delights in. It is not the cold marble and the chisel that warms the sculptor's soul; but the ideal, the form that yet exists only in his imagination. Not in the fine arts only, as is too often thought, but in all the employments of life, an active imagination is of inestimable value. Go where you will, all is dull without it. By its means only can the teacher become an enthusiast and make progress in his profession. Let the ideal—the Christian view of life, be kept up by every man in his own calling, and every calling becomes purified and ennobled, and has a charm that rises to sublimity when the mind comes to contemplate the relations of each to all, and of all to each. It is the want of a lively Christian imagination, that makes religion itself so often wear the aspect of drudgery. The Christian dispensation presents to us, as a glorious characteristic—a power reaching every hour and every employment of life—an exercise for the imagination, an ideal of perfection and bliss, in Christ, in Heaven, in renovated humanity.

At eleven o'clock, Mr. R. S. HOWARD of Thetford delivered a lecture on **EARNESTNESS**.—Earnestness is necessary to greatness and to success. This was illustrated by many forcible examples; and the place and work of earnestness in regard to the common schools of Vermont—earnestness in the community, in parents, in teachers, discussed practically and in considerable detail.

THURSDAY AFTERNOON.

MR. BARNARD'S REMARKS ON TEACHERS' INSTITUTES,
&c.

The remarks made by Mr. BARNARD on Thursday, by request of the Institute, were of a miscellaneous character, but chiefly in relation to *Teachers' Institutes*.

The object of these Institutes is, simply, the improvement of teachers. But it is by no means teachers only who are interested in them. Mr. Barnard, (who, as Commissioner for Common Schools in Rhode Island, has had more experience in the premises than any other man,) described his mode of proceeding.

The first step is to see where the most local coöperation can be had, and the most good done. Then secure a local committee of arrangements, to see how many will board teachers gratuitously, or contribute money to pay their board, and meet other necessary expenses. Then go through the county and enlist teachers; get every one to attend, and awaken in them a purpose of improvement. Go to the Principals of the Academies, and secure their coöperation,—which is easily done, when the influences of the movement are understood. They can be engaged to deliver lectures, &c. After these preparations, there is little difficulty in procuring teachers. It is better that there should be several; and teachers in the neighborhood should do most of the work,—each that part in which he most excels. The whole should be under the superintendence of an individual, say the county or state Superintendent, for instance.

* These arrangements being made, (and not before,) give public notice. Make the notice full and particular. Send it everywhere in Handbills. Put it in the newspapers. Enlist the aid of editors.

It is hardly worth the while to continue an Institute more than one week. They cannot supply the place of a Normal School. If an attempt is made to go over the studies, the interest flags, and after all it cannot be properly done. Four or five days, well employed, will suffice to secure the main purposes,—to give impulse to the teachers and the community, and to dispose of those difficulties in regard to which the teachers may want assistance. These short meetings are economical of time and money, and yet do incalculable good.

The subjects brought forward should be those of direct practical importance—the use of the slate and the black-board—the management of young children—modes of teaching and general management. The object should be to meet wants and remove difficulties that are felt, and to excite a sort of missionary spirit that will do great things in the midst of difficulties and with poor instruments. It is well to have a variety of methods presented, that each may profit by the one that best suits him. It is an objection to Normal Schools that they are too much confined to one method. Teachers should be encouraged to help each other. The discussions should be conversational, rather than controversial; and no question should be decided by vote. All should be left open, to act on each mind as it may. These conversational meet-

ings should occupy the mornings, and be for teachers only; the afternoon and evening may be public, with lectures and more formal addresses.

But how shall the money be raised? Go to men who have children, and who feel that they had better do anything than starve a child's mind.

Our school systems, Mr. Barnard remarked, are generally organized for an agricultural community.—They provide for territorial schools. The original school laws of Massachusetts required a school for the higher branches wherever the population was sufficient. We ought to secure the same object now by classifying scholars, and by union schools. Mr. Barnard was astonished to find that the village of Montpelier was throwing away the great advantages it possessed for securing a good school system. Instead of classifying all the children of the village, and putting the different classes under teachers adapted to each, and where there would be few studies, there were three or four different districts, under different management, and all the children in a district, great and small, must be together in the same room. With all the facilities of classification that Boston has, the people of Montpelier throw them away.—The same amount of money, under a different system, would employ a liberally educated man and four female teachers, through the year. The system would need but one committee to manage it, and the course of instruction would be improved. He wondered that villages would tolerate the abominable system that prevailed.

In order to promote constant attendance of children, the law of Rhode Island distributes the public money, one-half according to the number of children, and the other half *according to the average attendance*. The result has been decidedly good.

In regard to books, Mr. Barnard likes the Rhode Island law. The town committees are authorized to prescribe the studies and books, and in this way uniformity has been secured in every town but one. In some towns, two or three hundred dollars have been saved by the means. It is not necessary to change books for the sake of any slight improvement; there should be strong reasons. The committees are authorized to buy the books on the best terms, and let the parents have them at cost.

Mr. Barnard entered his "indignant protest" against the miserable wages paid to teachers, especially to young ladies; and against the "abominable practice of boarding round." It had been said that Vermont teachers were sent for from Massachusetts and Rhode Island. It is true. Rhode Island bids high for good teachers and gets them. We will get all your good teachers if you will not pay them better.

It is of little comparative consequence how school money is raised, provided you have plenty of it. It is best, however, to do it in such a way as shall make use of the parental instinct. Hence, free schools are not the best.

THE SCHOOL SYSTEM OF PROVIDENCE, R. I.

MR. BISHOP, who has been Superintendent of the

Public Schools in Providence for ten years, was called forward, and in reply to many questions put to him from different quarters, gave a very interesting and satisfactory account of the system established there, and its results.

Ten years ago the children were mostly in private schools, the public schools being in a bad state. By a single movement the old system was swept away,—the districts united into one, which is three miles in diameter—convenient school houses for four grades of schools were erected—the children classified and put under well qualified teachers, with a Superintendent at the head. The new school houses are constructed on the most improved plans; those for the lower schools located so as to accommodate every part of the city alike. Ample funds are appropriated by the city Council. The High School is in a central position, and girls go a mile and a half to attend it.

The course of instruction is uniform in all the schools, and the discipline thorough. The arrangements and management are such as to secure a high degree of punctuality and regularity of attendance, and good behavior in school. Special care is taken to cherish self-reliance in the scholars, and so successfully that, when teachers of the higher schools are detained at home a day by sickness, the studies go on with perfect order. This has occurred in several instances. The annual expense in the Primary Schools is about \$5; in the Intermediate \$5.25; in the Grammar \$6; in the High, \$12, for each scholar; all paid by the city.

The results are in every respect satisfactory. The schools, it is true, cost more than under the old system; but the value of real estate has risen so as to pay the increase of tax twice over. Towards the town of Cranston there is a large plain, part belonging to that town and part to Providence. Within the city of Providence a lot sells for \$200; the adjoining lot in Cranston for only \$100;—simply because there are in Providence good schools for the education of the owner's children without expense. It has been made most evident in Rhode Island that money expended for schools is one of the very best investments in regard to individual property and general thrift. A town was named by Mr. Bishop that had been stimulated to vigorous efforts in regard to schools, because it was found necessary in order to keep the people from moving away. Make a town a good place to live in, and property will of course rise. Sell part of your real estate, and secure good schools with the avails, and what is left will be worth more than the whole was before. Let any large village take hold of the business *thoroughly*—classify the scholars, provide good school rooms, and the best teachers, even if at twice the common price; and at the end of one year that community will be the richer for the expenditure, and all will acknowledge it.

As an illustration of the value of good teaching, Mr. Bishop described some exercises in arithmetic. Children five or six years old, are able to add at sight, long columns of figures about as fast as the teacher can point to them with her rod; and to subtract and multiply with the same rapidity. This power is nec-

essary for accountants, and is very easily acquired. The teacher begins with a column of 1s, then takes a column of 2s, then perhaps of 1s and 2s; thus proceeding gradually to larger numbers, and to the combination of even and odd. In the course of two or three weeks, addition in this way is mastered, so that any figures are added as rapidly as a child can speak. It is only necessary to be thorough with each step, securing rapidity and correctness with the first before you try the second; and to work at it every day. The advantage of the exercise in cultivating a habit of rapid thought and quick reply, is very great.

WHISPERING IN SCHOOL.

During one of the discussions, the President, in a pleasant way, called up Mr. ALLEN, Principal of one of the Public Schools in Boston, to make some statements in regard to whispering in school.

When Usher in one of the Public Schools, Mr. A. called to him two boys whom he could trust, and proposed that they should try to pass one half-day without whispering. He did not ask for a promise, but only whether they were willing to try. They readily assented. The boys having succeeded, he proposed that they should make the same trial for a day; then for two days; then for a week; then for a month; and so on. In the course of time he called in other boys, to do the same; proceeding slowly, till at length whispering was banished from the room.

When appointed Master of one of the schools, he adopted the same plan, with the like success. He has large classes in which none have whispered for two years. At least he has not seen them whisper, neither he or his assistants have any reason to suppose they have whispered, and they say they have not done it.

Mr. Allen, at intervals of an hour or so, allows a minute or two to his pupils for communicating with each other; and when they ask leave to speak, he gives it liberally, generally without asking a reason, and in such a way as to indicate confidence in the pupil. He does not think they abuse his confidence.

Mr. TUTTS stated that he had visited 10 or 12 schools in Windham County in which he had reason to believe there was no whispering. One of them was a school of 60 scholars, as happy as birds, under a single teacher.

THURSDAY EVENING.

Some remarks were made by the State Superintendent and by Rev. S. R. HALL in regard to the improvement of schools in this State.

Mr. HALL remarked he had spent ten years out of the State (in Massachusetts and New Hampshire) in positions that gave him good opportunities for observation. For ten years before and ten years since, he had enjoyed like opportunities in Vermont. He thought that before the enactment of the present law our schools were deteriorating. For the last four years there has been an obvious progress. He was in Massachusetts when the change began there, and he thought the progress in Vermont greater than it was in that State at the corresponding period. And

he has good reasons for expecting, for years to come, a more rapid progress than has taken place in Massachusetts.

LECTURE BY MR. BROOKS.

The evening was devoted chiefly to a Lecture by Rev. CHARLES BROOKS, of Boston, on the Duties of Legislatures in relation to schools.

Mr. BROOKS regards it as the duty of the State, not only to provide the necessary facilities and aids whereby the people may be educated, but to enforce the doing of the work. The Legislature is bound, he remarked, to bring into efficient action all the energies, physical, intellectual and moral, born in the State,—securing to every citizen the opportunity to make the most of himself. A physical man, without intellect or conscience, is just one-third of a man. Add intellect, and he is just two-thirds of a man. [Many of the hearers dissented from this statement, and from not a few others in the Lecture.] Body, mind and morals must be equally cared for; and the Legislature must take that care, because the child is born to the right to enjoy it. The law of Indiana Mr. B. regarded as a model,—providing, as it does, for the education of all the children of the State by an equal tax on all the property,—the money to be equally divided according to the number of children.

In prescribing the studies to be pursued, the Legislature should regard the whole being of the child. Some that now occupy much time should be displaced by the introduction of others. Music and drawing should have a prominent place in every school; as should also *logical exercises*,—the teacher proposing to the whole school, a question, and requiring each pupil to give his answer *with reasons*. In many German schools two hours daily are given to this exercise. It is a great thing to be able to stand up before others, and *think*; and this exercise cultivates the power. Attention to morals should be not only daily, but constant. The reading of the Scriptures and morning devotions should be regarded as of great importance. A text book should be studied; and for this purpose Mr. B. recommended in strong terms, the *Manual of Morals*, lately published, understood to be the work of a lady in Bangor.

Schools should be divided into three orders, Primary, Grammar, and High Schools; in which there should be a regular course of instruction, and the pupils advanced from one to the other after strict examination. Normal Schools and Teachers' Institutes are also a necessary part of the system.

The Governmental organization should include a Board of Education, consisting of the Governor, the County Superintendents, and a Secretary. The Secretary should devote his whole time to the work,—as should also the County Superintendents. Town Committees should be chosen with the understanding that they will hold the office for several years. The Board of Education should have the control of the funds; and should make honorary presents to those teachers who should remain longest in charge of the same school.

As to the Normal Schools and Teachers' Insti-

tutes,—the whole school system of Germany rests upon eight words—*As is the Teacher, so is the School*. The stream rises no higher than the fountain. The Legislature and the Board of Education should be constantly striving to provide better teachers. There should be a constant and most vigilant and energetic supervision. If you have a Bank with a capital of only \$50,000 to manage, you do not trust it, without the most careful watching. Nor will you thus neglect any great interest, except the very highest of all—your children's minds and hearts. The best legislation will do nothing without sleepless and untiring energy and vigilance somewhere.

Mr. Brooks protested, with great earnestness, against the whole spirit of legislation in this country. It is not based on any conception of the exhaustless riches of a child's mind, and of the State's duty to every child. It cleaves to the earth, and cares only for low and earthly interests. In regard to the wants of the mind, and the capabilities of the soul, it is blind to the whole matter. Our legislation consists mainly of prohibitions, penalties, guards, conditions; it limits grants, it imposes fines, it punishes offenders; its chief action is to restrain. Our republican principles call for a higher idea of legislation than all this; the very spirit of our institutions groans and cries out—*excelsior—excelsior!* How would two hundred men, each conformed to the perfect character of Jesus Christ, legislate with reference to the highest interests of humanity? Doubtless they would urge onward, as well as restrain. They would feel bound to see that what every child needs to fit him for life is found in the school-room, including all the elements of true patriotism and true virtue. It should be a recognized fact in our legislation in regard to schools, that Christian hearts are the cheapest police. Legislatures should act the part of a father; shall we never hear from their halls anything but threats, imprisonments, and fines?

Under a proper system of legislation, teachers would be well paid. As it is, not a class of laborers under the sun is so ill paid. It is the fashion, with many towns, to pauperize education—not knowing that the dearest of all dear things on the face of this earth is a cheap schoolmaster. Pay the best talent—provide libraries and apparatus—see that the school has all that money can do for it; and not act as if mind and morals were the only things that may be neglected in legislation.

Mr. B. goes further than this—regarding it as one of the first duties of the State to see that every child is educated, whether the parent will or not. The child must be taught to read the law he is to obey, the ballot he is to cast, the Bible that is to control his whole being, and make him a worthy citizen. Can it be that we have a right to hang by compulsion, and not a right to educate by compulsion, that hanging may not be necessary? The conscience, or moral nature of man, is a fact in the eternal universe of God—a fixed, unalterable, eternal fact, that time cannot waste, and that underlies all human interests, all human happiness, all human hope. This fact the legislator is bound to

recognize; and recognizing it, he must see that every child is educated and made to understand what God made him for. Our position in regard to the cause of human progress throughout the whole earth demands it; by our own property, safety, power, and happiness depend upon giving to every child the ability to reason and to judge; on seeing that in every breast the power of conscience is quick and strong.—Let, then, this Institute lift high the standard of education, and look to legislators in the confidence of right and of hope.

After the evening lecture, some appropriate concluding remarks were made by the President: the thanks of the Institute were voted to the lecturers, to the people of Montpelier, and the choir; and the Institute adjourned with expressions of high satisfaction and a thousand reciprocal good wishes.

The people of Montpelier, by their hospitality and their attendance at the lectures and discussions, manifested much interest in the meeting. Seventy-one new members were added to the Institute, being more than for any three years previous for a long time. The gentlemen from other States were evidently gratified with the hearty welcome that was evinced every hour of the three days, and went away rejoicing that the meeting had been eminently a good one.

OFFICERS OF THE INSTITUTE.

The officers of the Institute for the ensuing year are as follows:

President—Gideon F. Thayer, Boston.

Vice Presidents—Thomas Sherwin, Barnum Field—Samuel Pettes, Solomon Adams, William D. Swan, Samuel S. Greene, Boston; John Kingsbury, Na, than Bishop, Providence, R. I.; Horace Mann, Baruas Sears, Newton, Mass.; Benjamin Greenleaf, Bradford, Mass.; William Russell, Merrimac, N. H.; William B. Fowle, Concord, Mass.; Henry Barnard, Hartford, Ct.; Edwin D. Sanborn, Hanover, N. H.; William H. Wells, Newburyport, Mass.; Richard S. Ruat, Northfield, N. H.; Alfred Greenleaf, Brooklyn, N. Y.; William G. Crosby, Belfast, Me.; Horace Eaton, Benjamin Labaree, William Slade, Middlebury, Vt.; O. H. Smith, E. J. Scott, Montpelier, Vt.; Worthington Smith, Burlington, Vt.; Samuel Jones, Columbia, S. C.

Recording Secretary—Charles Northend, Salem, Mass.

Corresponding Secretaries—Charles Brooks, Geo. Allen, Jr., Boston.

Treasurer—William D. Ticknor, Boston, Mass.

Curators—Nathan Metcalf, William O. Ayres, Samuel Swan, Boston.

Censors—William J. Adams, Joseph Hale, J. D. Philbrick, Boston.

Counsellors—Rufus Putnam, Salem, Mass.; Amos Purry, Providence, R. I.; Daniel Mansfield, Elbridge Smith, Cambridge, Mass.; S. W. King, D. P. Galloup, Danvers, Mass.; Leander Wetherell, Rochester, N. Y.; M. P. Case, Newburyport, Mass.; Jacob Batchelder, Lynn, Mass.; Ariel Parish, Springfield, Mass.; D. P. Thompson, Montpelier, Vt.; Solomon Jenner, New York.

MEETING OF CITIZENS.

MONTPELIER, Vt., Aug. 16, 1849.

At a meeting of citizens of Vt. who had been in attendance upon the sessions of the American Institute of Instruction of which Prof. HORACE EATON was chosen President, and C. A. LEACH Secretary, the following resolutions were, on motion of R. S. HOWARD, seconded by President LABAREE, unanimously adopted.

1st. *Resolved*, That, as citizens of Vermont, we render our thanks to the American Institute of Instruction, for the appointment of their Annual Meeting in this State, and for the satisfaction we have experienced in listening to the able and instructive lectures and discussions during their present session.

2d. *Resolved*, That we cordially approve of the objects of this Association as a powerful agency in the cause of Popular Education; and that its officers and members are entitled to the gratitude of the public for their efforts.

3d. *Resolved*, That we pledge ourselves as far as in our power to aid and coöperate with the American Institute in promoting the cause of popular education—by disseminating broader and juster views throughout the community—by raising the qualification and estimation of Teachers,—and, by inciting others to perform their part of this great work.

Resolved, That the Secretary be requested to communicate a copy of the foregoing resolutions to the Institute.

HORACE EATON, President.

C. A. LEACH, Secretary.

We devote this number to an account of the late meeting of the *American Institute of Instruction*, in the belief that nothing could be more acceptable to our readers generally. The meeting was one of great interest. Our report, imperfect as it is, contains many things that are worth treasuring up.

Of the Lectures by Mr. AYRES, Mr. HOWARD, and Professor SANBORN, we have prepared no report. Those who were present certainly will not attribute the omission to any want of comparative ability or interest in the lectures. Those gentlemen were among the most active and useful members of the Institute present, and their lectures very able. In our choice of materials for working up, our single rule has been to take such as, with our imperfect notes, we could make the most useful to the majority of our readers. We say, with our imperfect notes; and are bound to add, that the omitted lectures (that of Mr. HOWARD particularly) contained much that, had our pencil done its duty better at the time, would have come in under the rule.

Our Agricultural friends will not think themselves wronged at all by the omission, in this number, of the usual agricultural department. The interests of education in Vermont are the interests of an agricultural people—the interests of farmers. They feel more and more every year, that it is not bodily strength, but mind that makes the profit on a farm, and that a hundred dollars goes incomparably further even towards filling the barn, when expended to make thinking men than when used to buy additional acres.

VEGETABLE INTELLIGENCE. If a pan of water be placed within six inches of the stem of a young pumpkin, or other vegetable marrow, it will in the course of the night approach it, and will be found in the morning with one of its leaves floating on the water. This experiment may be continued nightly until the plant begins to fruit. If a prop be placed within six inches of a young convolvulus, or scarlet runner, it will find it, although the prop may be shifted daily. If after it has twined some distance, it is unwound and twined in an opposite direction it will return to its original position, or die in the attempt; yet, notwithstanding, if two of these plants grow near each other, and have no stake around which they can entwine one of them alters the direction of its spiral, and they will twine round each other. Duhamel placed some kidney beans in a cylinder of moist earth; after a short time they commenced to germinate, of course, sending the plume upward to the light, and the root down into the soil. After a few days the cylinder was turned one-fourth round, and again this was repeated until an entire revolution of the cylinder was completed. The beans were then taken out of the earth, and it was found that both the plume and radical had bent to accommodate themselves to every revolution, and the one in its efforts to ascend perpendicularly, and the other to descend they had formed a perfect spiral. But although the natural tendency of the roots is downwards, if the soil beneath is dry, and any damp substance be above, the roots will ascend to reach it.

It is becoming a kind of proverb in everybody's mouth, that it is the duty of parents and teachers to make children happy. But there are two ways to give children pleasure. The one is to make them happy in the performance of duty; the other is to find out what appetites, tastes, or passions they desire to have gratified, and minister to these. When we talk about making children happy, let us understand which kind of happiness is meant.—*Mr. School Jour.*

SIR JOHN MASON, an eminent English statesman, said on his death-bed, "Lo, here have I lived to see five princes, and have been privy counsellor to four of them; I have seen the most remarkable things in foreign parts; and have been present at state transactions for 30 years; and have learnt this after so many years' experience—that temperance is the best physician, seriousness is the greatest wisdom, and a good conscience the best estate."

THE EMPEROR NICHOLAS'S ESTIMATE OF NOVELS. He has recently issued an ukase which imposes a duty of ten copecks a pound on all printed books imported into Russia, with the exception of novels and romances, for which *double duties* shall be paid.

Cellars and granaries we fill.

With all the bounteous summer's store,

If the mind thirsts and hunger still,

'The rich man's emphatically poor;

Slaves to the things we too much prized

We masters grow of all that we despise.

When there are more children in school than the teacher can supply with suitable instruction, they may be compared to the inhabitants of a besieged city, where there is too little food for the mouths of the besieged. Each must be put upon short rations.

SCHOOLS IN LOUISIANA. The Legislature has passed an act appropriating \$550,000 for the support of free public schools in the State.

The greater the difficulty, the more glory there is in surmounting it. Skillful pilots gain their reputation from storms and tempests.

The shortest and surest way to live with honor in the world, is to be in reality what we appear to be.

The attention of a child is deadened by long expositions, but roused by animated questions.

GOOD ADVICE.

If thou wishest to be wise

Keep these words before thine eyes—

What thou speak'st, and how, beware,

Of whom, to whom, when, and where.

Fatal effects of luxury and ease.

We drink our poison, and we eat disease,

Indulge our senses at our reason's cost,

Till sense is pain, and reason's hurt or lost.

The Board of Education in Syracuse, New York, have adopted a resolution, that no man who uses tobacco, or alcoholic drinks, shall be employed as a teacher, and the common council have formally ratified it.

THINGS LOST FOREVER. Lost wealth may be regained by a course of industry, the wreck of health repaired by temperance, forgotten knowledge restored by study, alienated friendship soothed into forgiveness—even forfeited reputation won back by penitence and virtue. But who ever again looked upon his vanished hours, recalled his slighted years and stamped them with wisdom, or effaced from Heaven's record the fearful blot of a wasted life!—*Mrs. Sigourney.*

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,
and sent to subscribers on the following

TERMS:

For a single copy,	- - -	50 cents.
5 copies, sent to one address,	- - -	2 00
10 " " " "	- - -	3 00
16 " " " "	- - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

SCHOOL JOURNAL

AND VERMONT AGRICULTURIST.

Vol. III.

WINDSOR, VT., OCTOBER, 1849.

No. 6.

THE SCHOOL JOURNAL.

For the School Journal.

Suggestions to Teachers.

BELoved TEACHER :—Your charge is precious ; your duties are arduous ; your school is expensive ; your relation to your scholars, their parents, and the community, is responsible ; the time for children to acquire an education is short ; a common education embraces a much wider range than formerly ; the advantages of learning, in all the departments of life are incalculable ;—therefore all the friends of the rising generation are anxious that you should be as good, as successful, as profitable a teacher as possible. To this end allow me to give you a few suggestions from my own experience :—

1. Resolve that yours shall be the best school in town.

2. Learn as much about the peculiarities of the district beforehand, as you can.

3. Make your plan, so far as you are able, to accommodate the district.

4. Feel that much, immensely much, is depending on the first impression you make upon your school—that the first day is to give a shape to all the succeeding days of your school.

5. As you enter your school-room, appear not in your official consequence, but in your most pleasant, familiar, cheerful mood, and thus throw yourself into the hearts of your scholars, and secure at once their confidence.

6. Address your scholars upon the value of education ; the anxiety of the parents ; your own burning desire for their improvement ; the cost of a three or four months' school, all things considered, and your determination to have, if possible, the best school in town, and call for a vote of your scholars, whether they will coöperate with you in this determination.

7. In the arrangement of your school, have as few classes as possible, and see that your classes are furnished with the necessary books.

8. Divide your time among the classes, giving them all their just proportion, and go through the exercises of your classes daily, and in the same order, having everything in its place, and every exercise in its proper time.

9. In order to raise the ambition of your scholars,

be wide awake yourself, moving about the school-room like one really at work ; keep your inventive powers upon the stretch for new and striking illustrations ; make a free use of the black-board ; get the whole class, when practicable, to work on the black-board at the same time ; lead your scholars into all the whys and wherefores, so that they shall see they are improving, and the school is profitable.

10. As to the order of exercises, begin with reading, requiring every scholar to read slowly, distinctly, naturally, and questioning him as to the stops and marks, and other rules of reading, until these are perfectly familiar ; have your scholars go over little ground, and that well, rather than much, and that poorly. Next, have your classes in Arithmetic, requiring all the scholars that can read, or count, to recite, either in written or mental arithmetic. Be particular to have your scholars recite in classes, and have every member of the class in written arithmetic do at least one sum on the blackboard every day, and give the reason of every step in the process. Labor hard to give your scholars a thorough knowledge of the book as they advance. To close the forenoon exercises, hear the smaller classes read their spelling lessons and spell.

In the afternoon, commence as in the morning, with reading ; then proceed to hear lessons in grammar, geography, history, the sounds of the letters, abbreviations, stops and marks, &c., requiring every scholar that can commit to memory, to have at least one recitation. In grammar, have your advanced scholars point out, first, the sentences in the parsing lesson, and name the words expressed or understood by which they are connected. Have every conjunction, conjunctive adverb, and relative pronoun, parsed, and its connection shown—every preposition, and its relation pointed out—and every adverb, and its modification given. Having gone through with all the recitations of the afternoon, close, as in the forenoon, with spelling, requiring the smaller classes occasionally, in connection with this exercise, to recite in concert the abbreviations, stops and marks, sounds of the letters, &c.

11. Allow your scholars a recess, both forenoon and afternoon, of five minutes to the males and five to the females ; and with the view of dissuading the scholars from whispering and play, you can allow the girls, while the boys are out, to leave their seats and

do up all their whispering; and so with the boys when the girls are out.

12. Your time must be mostly occupied with the classes. Of course, you should not stop some minutes to work out a sum, or parse a difficult word, or look out a place on the map—but, by reviewing the lessons beforehand, you should be able at once to tell the scholar how to do his sum himself, how to parse his word, and where to find his place on the map.

13. To secure attention at the recitations, call upon the members of the class, one here and another there, as you shall choose, not giving the scholars to know who shall next be called upon; and require the inattentive scholar to repeat what has just been recited.

14. Have your classes review their studies often. Devote the last day of every week to reviewing.

15. If you have succeeded in securing the good will of your scholars, and in raising their ambition, you will have but little to do in governing. Keep yourself well governed; be on your guard against anger, levity, moroseness, fretfulness, scolding; be an example to your scholars in all that you would require of them, and give them work enough, and you will find but little if any difficulty in governing your school. Begin with few rules. Appeal to the consciences and good sense of your scholars; labor to make them see the propriety and necessity of good order and of proper government, and they will generally cooperate with you for these ends. If you find reproof or punishment necessary in any case, administer it privately, and never before the whole school; for the offender, arraigned before the whole school, will not care for his offence and lament it, but make it his whole concern to show himself courageous, and to come off victorious.

These suggestions I have given you, not so much with the expectation that you will follow my course precisely, as that you will read authors upon this subject, and inform yourself as much as possible in regard to school-keeping, and thus be able yourself to adopt and pursue the best possible course. "As is the teacher, so will be the school."

For the School Journal.

The Study of Book-keeping.

The ancient Philosopher, who, when asked, "To what studies should boys attend?" answered, "Those which they will practice when they become men," uttered a truth too often lost sight of. Many of our schools entirely neglect one branch of education, which every child who attends them should now practice, and for which, each will have occasion during the whole after life,—Book-keeping.

For a little boy and girl to minute down the manner in which their pennies are spent, may be thought childish. It is childish. So let all their actions be! It is not the less an exceedingly useful practice. It encourages habits of neatness and accuracy. It teaches useful lessons. A record in permanent characters of foolish extravagancies is a constant reproof; one of generous and worthy expenditures is ever a source of gratification. Such a habit commenced in season,

would have saved many a man from bankruptcy; and would have enabled many a woman to live happily upon an income whose smallness is now a constant source of misery to her and hers. For it is in the manner of using their incomes, rather than in the amount thereof, that people differ. A knowledge of Book-keeping is an assistance to a young man seeking almost any kind of employment. In some it is indispensable. It is frequently,—as in the remarkable case of Gen. Worth,—a stepping-stone from a subordinate to a lofty position.

Every man, as he commences business for himself, has occasion for some simple and accurate method of keeping accounts. For the want of early instruction, he borrows or forms one; frequently tedious, indefinite, and inaccurate. If he adopts none, he will meet with vexations, losses, and difficulties, and lawsuits embracing all three. How often have lawyers been called in to settle the accounts of honest men, and kind friends, and who would have been the best arbiters of their own affairs, if their memories had been assisted by a little "setting down in black and white." Persons of good opportunities for observation, have expressed the opinion, that one half of the petty pecuniary lawsuits, and many of the more important, would be prevented by the universal practice of keeping accounts correctly.

But how shall this end be attained? Evidently the mass of the people can be reached through the FREE SCHOOL, and in that way only. Every child should be taught, among the most indispensable lessons, the art of keeping accounts in a simple and intelligible manner. A little practice will make it an interesting exercise for him to seek or make up accounts. He should also keep an account of his own receipts and expenditures making himself 'debtor to' every thing received, and 'creditor by' every thing delivered or paid out. Any simple plan neatly kept will answer the purpose. He may use a common memorandum book or a single sheet of cap paper, folded and ruled by himself, with six columns, one for dates, one for items, two for dollars and cents received, and two for those paid out; like the following.

Example of page 1:—

1849	WM. B. THOMPSON,	Dr.	Cr.
July 4	To Cash on hand,	35	
" "	To rec'd from father,	75	
" "	By one knife,		28
" "	By one pencil case,		70
" "	By am't cred't, for'd,		12

Such a record is the best preventive of useless expenditures. It is essentially useful for students, and others away from home, who have not been accustomed to control funds and make purchases. It also does much to promote habits of neatness and accuracy, and gives an idea of Book-keeping; which may be developed as circumstances shall require.

Before leaving school, every young man should learn a simple and intelligible mode of Book-keeping by Single Entry, sufficient for the purposes of ordinary business. But we are told, and truly, that "the tendency in our schools at present is to distract the pupil's attention—already too much divided up—by a multiplicity of studies;" that "too little attention is paid to elementary instruction; and too great anxiety

is manifested to press forward to the higher studies, to the neglect of those which are indispensable."

If Book-keeping be of the value represented, it should find a place at whatever cost. But we think that this objection lies not so much against the number, as against the character and abuse of the studies taught in school, and that Book-keeping will improve, rather than obstruct, elementary instruction, by giving an immediate opportunity of practicing it. It is evident to the most casual observer, that the pupils of the district school do not accomplish what they would were the intellect fully aroused and the time and attention wholly devoted to study.

Book keeping if taught as an actual process and not a dead letter, will arouse the mental faculties of the scholar, fix his attention, bring his mind into more direct contact with that of the teacher, and materially increase his interest and enhance his progress in several of the elementary studies. He reads of familiar facts, and therefore understandingly and well; he writes independent of his copy, sees and corrects his faults, and acquires a more available hand; he composes,—and frequently the simplest act of composition is the best introduction to the art of expressing thoughts by writing;—he practices Arithmetic independent of the book, and is thus released from his thralldom to rule. Besides, with a competent teacher or a suitable text-book so much knowledge of Book-keeping as is sufficient for ordinary pupils, may be acquired in far less time than is usually deemed necessary. Those, indeed, who are designed for commercial life, should make the science and art of Book-keeping by Double Entry, a subject of long continued and earnest study; not however in the district school. This requires much of the time and attention of the teacher, and a previous preparation not to be expected. But any young man may take it up by himself, if he will lay aside his text book during his journalizing and posting, and repeat these operations until they become perfectly familiar.

The experience of the writer in teaching this branch has embraced quite a variety of text books. He regards B. Wood Foster's, published by James French, Boston,—there is a very different work with a similar title—as an excellent manual for commercial students of the present modes of book-keeping.

Adams's new work, published by J. W. Prentiss, & Co., Keene, seems to be, like his other works, admirably adapted for the use of ordinary learners and to the actual wants of the school room. The most inexperienced teacher need find no difficulty in comprehending it; and by its aid may qualify himself to give oral instructions which shall be of inestimable value to his pupils. Any one whose early education has been deficient in this respect, may find here just the information which he needs, in an intelligible and convenient form.

Are teachers all aware that any small work can be obtained *through the mail* at a trifling expense for postage! Either of the above works, and probably—for I know nothing about it—two or three copies of the latter, can be obtained by sending one dollar to the publishers.

H..

For the School Journal.

Answers.

Messrs. Editors:—Allow me to say a few words in answer to the "Philosophical Question," in the School Journal for August. The inquiry is, "If a dam be built in a river, say with ten feet fall in a mile, why does the water set back beyond the level of the dam." The answer is simple and obvious.—The water flowing into the upper end of the pond and discharging itself at the lower end must of course flow the distance of a mile before it reaches the dam. Now water will neither flow *up hill* nor on a *level*, unless it be moved by some force either acquired or applied. This being the fact, it follows as a matter of course, that the water will rise as much higher at the upper end of the pond, than it does at the lower end, as it requires fall in flowing the distance of a mile, and the greater the rapidity of the stream, the greater the height of the water. Also if the water flows over the dam in any depth, it will rise to a corresponding height in the pond. These appear to be the natural causes for the "cases of litigation" that were mentioned, upon which I did think I should make a few comments, when I first took up my pen, but I forbear.

L. W. B.

Windham, Aug., 1849.

Solution to the first Enigma on p. 50.

War, Reel, Wool, How, Bow. My whole is a Wheelbarrow.

L. W. B.

Solution to the second Enigma on p. 65.

An acre is a patch of ground,

Four letters are its utmost bound;

And care will wear out human life—

A race is run with eager strife. L. W. B.

DECLIVITY OF RIVERS. A slight declivity will suffice to give the running motion to water. Three inches per mile in a smooth, straight channel, gives a velocity of about three miles an hour. The Ganges, which gathers the waters of the Himalaya mountains, the highest in the world, is, at eighteen hundred miles from its mouth, only eight hundred feet above the level of the sea—that is, about twice as high as St. Paul's Church in London; and to fall those eight hundred feet in its long course, the water requires more than a month. The river Magdalena, in South America, running for a thousand miles, between two ridges of the Andes, falls only five hundred feet in all that distance. Above the commencement of the thousand miles it is seen descending in rapids and cataracts, from the mountains. The gigantic Rio de La Plata has so gentle a descent to the ocean, that in Paraguay, fifteen hundred miles from its mouth, ships are seen which have sailed against the current all the way, by the force of the wind alone; that is to say, which, on the beautiful inclined plane of the stream, have been gradually lifted by the soft wind, and even against the current, to an elevation greater than that of our loftiest spire.

For the School Journal.

Are our Schools Improving?

This is a question in which every one must feel an interest. No subject can be proposed which embraces so much of interest to the people of Vermont as that of her schools. There is no subject with which her real prosperity as a State is so intimately connected. No inhabitant of the State is so poor as to have no interest here—none so rich that he can have a greater. As members of a Commonwealth to which we are attached, and in regard to which we have some occasion to feel an honest pride, we cannot but rejoice in the outward signs of prosperity.—We already feel a degree of pride in speaking of Vermont railroads, and Vermont products and manufactures; we are almost astonished at our enterprise when we see the iron horse thundering and puffing through our valleys, promoting intercourse and traffic between once distant places. But these are not intangible signs of *real* and *permanent* prosperity.—And our pride, in view of them, is a little chastened when we look at the real condition of our schools, and remember in what the *real wealth* of the State consists. Well cultivated farms are some evidence of prosperity, but well cultivated minds furnish better evidence and better security of continued thrift and real advancement.

Seeming prosperity sometimes furnishes to the discerning eye of intelligence the surest indications of approaching ruin. Prosperity, to be permanent, must have a foundation in the *intelligence of the people*, and unless efforts to promote such intelligence shall precede, or at least keep pace with, efforts to improve our condition outwardly, patriotism may well tremble for the future.

It is a *truth*, then—and oh! that the people would act upon the truth—that the most vital interests of the people of Vermont are centred in her common schools. The *whole people* have interests here in common, and the whole people must feel an interest in the question with which we started—are our schools improving? And it ought not to satisfy the people to be able to say, "they are better than they were"—they want to know that the process of improving is *actually going on*; for, whatever may be said of their *relative* standing, they are *positively* very far from the point of excellence which should satisfy.

We have an excellent school system, as it exists in theory. It has been pronounced, by eminent men out of the State, as one of the *best* that has yet been devised. And it is often asked, "Is our present system effecting any good for the schools?" The question sometimes betrays a misapprehension in regard to the *design* of statutory provisions, in reference to the schools. No system, however excellent, can combine in itself *executive* power. A machine may be perfect, in itself; and the results of its action every way complete, but the self-impelling power is not there; it must be worked by force from without. Precisely so with a school system. Statutes, of themselves, can never improve the schools.—They only *indicate the way*; the *people* must do the

work. In order to prosecute the work successfully, there must be *harmony of action*; to secure this, there must be some *plan agreed upon*. Obviously, the end could not be secured by having every man, however well disposed to work, have a plan of his own, and act independently. The wisdom of legislators was needed to devise a method which should concentrate and render effective the efforts of individuals, and make a given amount of money accomplish the greatest possible good. Our system lays out work; and if it *gets itself done*, the schools will improve. It indicates an excellent way of doing it, but the moving power is in the hearts of the people. It provides for the appointment of men for the performance of specific duties, and if those duties are properly performed, good will be effected; but it cannot furnish the men, nor make sure the fulfilment of their duties. Nor was it ever the design of the law that the work should be taken out of the hands of the people and made over to the superintendents. These are provided for, not to relieve the people of duties which no other can perform so well, but just to *aid the people*, meet a deficiency, and perform important duties which *no one in particular* would feel himself called upon to look after, and which would otherwise be, as they generally have been, neglected.

Under a despotic government, a school system might be made efficient, independent of the care or coöperation of the common people; but with us, the schools will prosper and improve only in proportion as the *people* feel, and *manifest* an interest in them.

A good school system, with provision for a general superintendence, must be regarded as indispensable to the interests of the schools; but this, with us, can never supersede the necessity of constant vigilance and unremitting efforts on the part of the whole people. It is for them to say whether our system shall exist only as a dead letter, to be admired in other States as excellent in theory, or be made vital by the infusion of their own spirit and life, and efficient to the accomplishment of the noble ends designed.

R. C.

REMARK. It would be a good thing in our correspondents—a hundred or two of them—to send us facts in answer to the question that "R. C." proposes.—Eds.

For the School Journal.

Notes of Summer Schools.

School No. 49. A small brick house, high seats, small scholars near the stove, no room in the floor for classes; room washed and whitewashed, has Mitchell's Outline Maps. 30 scholars, some of them bright, but a backward school; and upon asking one of the neighbors the reason of it, "We have," said he "had as much schooling as any of the districts, but the truth is, parents have not cared anything about the school, whether their children learned or not, or attended school or not, but we are trying to do better now; have hired a good teacher and mean to sustain her." The teacher has a pleasant countenance, live-

ly, pliable voice, is a natural reader, greets the children with a "good morning" when they enter the school room, teaches them manners, excels in instructing small scholars.

School No. 50. Forty scholars, nearly of an age, bright, but noisy, whisper about their lessons, and I should think about other things too; undertook to recite in concert, but too lazy and heedless to succeed. The teacher, Miss A., well qualified, amiable, self-possessed; has no animation in her countenance or voice, no enthusiasm, decision or authority; is a good reader, but has no faculty to make her scholars read well; has good manners, but the school was very unmaoanerly, so that I was glad to get away; would teach a very good school where the children were all willing to behave well, and anxious to learn.

School No. 51. A large, convenient school room. The teacher prompt, active, sprightly, has a faculty to teach, and has made a good beginning in this, her first school: has attended a 'Teachers' Institute,' (as also the two last mentioned teachers) and evidently derived advantage from it. Not over a dozen scholars in the school this summer, and not over 15 or 20 last winter. This district might unite with an adjoining small district. Parents visit the school.

School No. 52. A new house, large and convenient, though seats for younger scholars too high.—When several rods off, heard the loud shrill voice of the teacher and scholars; children hurry out at recess like a flock of sheep; manners rude and uncouth.—The teacher remarked that no one ever visited the school last winter, or this summer, and the children acted worse than usual. She could not persuade parents to come and see their children, though they would promise to come. Teacher boards round, some families being a mile and a half off. Class of small scholars had been through Colburn's Arithmetic and understood it. A class read and spelled quite well, which began their letters last winter. The teacher full of energy, resolution, and enthusiasm, has a clear head, and drills the scholars on hard points till they can understand them, and explain them; has a loud, shrill, resolute voice, which she uses on a high key, both in teaching and scolding.—"Boys, don't let me hear that whispering again."—"Joseph, take your book there and go to studying."—"Susan, put up that string."—"Stop there, sit up and go to studying in a minute."—"May I leave my seat?"—"No, sit down."—"Girls, what you doing?"—"Boys, stand on the mark, don't show any of your spunk here."—"Stop that whispering, I say." The teacher not one of those who could and bring nothing to pass; but the roguish boys and girls evidently take great delight in transgressing, as far as they can do it softly, expecting to mind after the usual quantum of scolding, for the eye, voice, and air of the teacher show that disobedience, beyond a certain point, would not be safe. Says she has not punished a scholar yet, but I remarked that I thought a little whipping and less talking would be better for her, and the scholars too; though a teacher of such resolution and decision, would seldom need to whip or scold either, if she would only make up her mind to say less, and

teach her scholars the meaning of what she says.—This teacher, too, might make more use of moral influence, as she evidently has a great deal of good nature, and uncommon originality and fertility of mind, as well as a fluent tongue and strong lungs.

School No. 53. House, as usual, near the road, weather-beaten, small, low, dreary, with seats so high, half of the scholars cannot touch the floor with their feet when sitting. Dwelling houses and barns in the neighborhood in good repair. Teacher understands the studies, has a good education, has taught several schools acceptably, is wanting in activity and energy, has an easy, negligent air, sleepy look, draws her words, and if she has "the ornament of a meek and quiet spirit," has not the "outward adorning of plaiting (or combing) the hair." People in this district opposed to the school law, never visit the school, and do not wish their teachers to be examined.

June.—Visited a village school. House near the road, sheds going up each side of it, so as to shut out the light. Has not been a forward school. An experienced, energetic teacher, deliberate, self-possessed, familiar with the text-books, secures the attention of every scholar in recitation, has broken up whispering and loud study, has a faculty to wake up the intellect if there is any to wake up, teaches good manners, (at which some of the parents grumble) teaches the scholars to sing and march, is enthusiastic in her profession, awakens an interest in education among the people, appears as much at home in the school room as a sea captain on a vessel, and is as much superior to a raw teacher as an experienced sea captain to a raw sailor. In some districts however, there is a class of people more likely to find fault with such a teacher, than with the class of easy, plodding teachers, against whom there is heard "no complaint."

July.—Visited School No. 55. A young teacher 16 years old, has a dollar a week, is bright, but awkward, girlish, and ought to be in school herself, as most of the district are convinced. But the district is small and they could not afford to employ a good teacher.

School No. 56. Some of the scholars very bright and forward, but shewed a want of discipline, drill, and interest. The teacher called good, but is rather formal, precise, and mechanical, lacks tact, life and energy, is confined to text-book, allows classes to read in a sing-song, monotonous tone, to make their manners or not as they please, and the awkward manners they make are a disgrace to teacher and pupils. One of the neighbors remarked that the teacher was more interested in getting ready for house-keeping, than in keeping school,—that her mind was not on the school, in school and out of school, she was so busy with the needle she could not find time to do anything for the scholars, or even to read an article in the paper on education.

JAMES TUFTS,

Supt. Com. Schools in Windham Co.

APT REMARK. Good old Roger Ascham, the instructor of the unfortunate Lady Jane Grey, says:—"It is a pity that commonly more care is had, yet,

and that among very wise men, to find out rather a cunning man for their horse, than a cunning man for their children. They say Nay! in one word, but they do so in deed; for to one they give two hundred pounds, and to the other two hundred shillings. God, that sitteth in heaven, laugheth their choice to scorn, and rewardeth their liberality as it should be. For he suffereth them to have tame and well ordered horses, but wild and unfortunate children; and therefore in the end they find more pleasure in their horse, than comfort in their child."

For the School Journal.

Female Teachers in Winter Schools.

Would the employment of a larger proportion of Female Teachers in our Winter Schools be economical?

Hitherto, in Vermont, they have been almost exclusively confined to Summer schools. In some of our neighboring States, with the improvement of the common school system, a different policy has been, to some extent, introduced, and has resulted, it is affirmed, in a manifest improvement of the schools. If this be so, it is worth while to inquire, whether some of our own schools may not be improved in the same way.

It is the common, and almost the only objection, to the employment of this class of Teachers in the Winter schools, that they are not competent to govern and instruct the older scholars that attend school at that season of the year. But in respect to many of our schools, this objection is inapplicable, since there is little, if any, difference in the age and proficiency of the scholars attending the Summer and Winter schools. In all schools of this class, it is obvious that economy would be consulted by retaining for the Winter schools, the teacher that has been proved to be faithful and successful during the first half of the year. In many cases this alternation of male and female teachers is doubtless perpetuated for no other reason than that such has been the uniform practice heretofore. It is only necessary, it would seem, to call the attention of parents and school committees to the results of this practice, to convince them of its want of economy. A different arrangement may not be economical merely because it secures the services of a female teacher for half the wages paid to one of the other sex, and, therefore, prolongs the annual school from six months to ten. In all this there may be no economy at all—for the saving must be made in the quality of the school, and not in its duration. It will be an economical arrangement, however, when it secures at a liberal compensation, such as will give importance and dignity to her calling, a well qualified female teacher, fond of the employment, and anxious to do good in it, and retains her for a series of terms in succession, or years even, if it be practicable.

Any considerable improvement in our schools while we continue to introduce at every successive term of the school a new teacher, and that teacher usually one to whom teaching is an untried business, is out of the question. It ought not to be expected. We

do not expect successful labor in any other pursuit under such circumstances, and least of all ought we to look for it in this.

The first term only qualifies a teacher to classify her scholars, and put them in the way of improvement. The character and capacity, both of teacher and scholars, must be mutually studied and understood, before much can or will be done by either.—The confidence of parents can only be won by personal acquaintance with the teacher, and upon their coöperation with the well directed efforts of the teacher, who does not know how much the success of every school depends? Besides, teachers differ in their modes of teaching and governing, and in the means of accomplishing a great variety of things in the daily business of the school-room. All this, it takes time to make a school familiar with. To one, therefore, familiar with the subject, the wonder will be, not that our schools accomplish so little, but that they accomplish so much; and more than all, that ingenuity which has been so fertile of improvement in most other departments of the social economy, has so long overlooked it in this.

There are, however, many schools in which an older and more advanced class of scholars is found during the winter season; and in respect to these, the objection mentioned above is supposed to have weight. But the experiment in other States has shown that there are female teachers that, even in these schools, can both govern and instruct, quite as well and as acceptably as their predecessors of the other sex.—Those who make the objection on the ground of government, doubtless rely too much on physical force to secure it. No amount of this in the teacher, in the absence of certain other attributes, can govern well an ordinary school of any age. Hercules, even, had he taught school, might have been defied by unruly boys, and put out of school, just as some of his kind have been; and that too where another individual, possessed of other qualifications, would rule without opposition. Government in school, all that deserves the name, is more a product of the moral and intellectual, than of the physical qualities of the teacher. It must first exist in his own mind, clearly conceived and understood as to its nature and its means, and both as a right and a duty. Nine-tenths of all the failures of teachers in this particular come from their ignorance of the thing, or of the means of attaining it. Let the idea of the thing clearly conceived and understood, be accompanied with energy, discretion, and firmness of character, and, whatever the physical capacity of the teacher may be, it will seldom fail to represent itself externally in the harmony and order of a well disciplined school. The rod, and compulsion, will doubtless be needed even then; but a female teacher is not disqualified for using them in most cases where it is expedient to use them at all. Let parents, or in case of their failure, let school superintendents, perform their duty in sustaining the just authority of the teacher, and the capacity of well educated female teachers will soon be found adequate to the task of governing most, if not all, of our district schools.

That female teachers, such as our State now furnishes, are not as well qualified to *instruct* in these schools as those now employed, is very far from being true. They ought as a body to be better qualified, and doubtless are. So few modes of honorable and profitable employment are presented to them, that a large proportion of the choicest talent and acquisition of the sex seeks for occupation in the district school. There are many excellent teachers of this class, doing good service in our State. Our County Superintendents will bear witness to their zeal, their perseverance, and their success. Let it not be inferred, however, that we would disparage the qualifications or character of the young men who have taught our Winter schools hitherto, where we thus speak. Far from it. They are all, and do all, doubtless, that ought to be expected of them. The choicest talent and acquisition among *them* cannot be expected to be content to labor on, and labor on, while they win to themselves skill and success in this ill-paid occupation, while so many others furnish them with much easier and more profitable employment. J. K. C.

For the School Journal.

Geography.

When doctors disagree, who shall decide?

The swarm of modern school-book makers are for the most part satisfied with simply presenting the same subjects in different forms. Sometimes, however, they make an innovation, for which it would gratify the public if they would give their authority. In a former number of the School Journal the substitution of the French for the English system of notation was referred to, which seems to have been generally but arbitrarily adopted in most of our later Arithmetics. An obvious difficulty occurs when it is stated in a work on Astronomy that the distance of a certain fixed star is estimated at three hundred and fifty billions of miles. Now is the scholar to understand that this sum is 350,000,000,000, or 350,000,000,000,000?

In Geography it is essential that changes should be made, as the boundaries of states and kingdoms are continually varying, and at the present day with unusual rapidity. But there are certain natural divisions and boundaries, for changing which it would be more difficult to assign a reason.

In most of our earlier maps, and in many of the modern, the boundary line between Europe and Asia is drawn through the Black sea, the sea of Azof, to the mouth of the river Don—thence up that river to a point where it approaches nearest the most western bend in the Volga, about 48° north latitude—thence east to the Volga, then following up that river to the mouth of the Kama, and up the Kama to the mouth of the Beila, and up the latter to its source in the Ural mountains.

In some of the modern Geographies now most generally used in our schools, the line is altered, and is drawn across the summits of the Caucasian mountains, leaving the Black sea a little south of the straits of Caffa, which connect it with the sea of

Azof, running in a S. E. direction and striking the Caspian sea in latitude 40°, or 41°—thence on the western and northern shores of the Caspian to the mouth of the Ural, and up that river to its source in the Ural mountains. By this alteration the province of Astrachan, Circassia and all the Caucasian region north of the mountains is thrown into Europe. In Ancient Geography, this disputed territory is called "Asiatic Sarmatia." In the American Encyclopedia, Circassia is described as a "country of Asia." Asia is represented as "separated from Europe by the sea of Azof, with the straits of Caffa," &c. In describing the Sarmatians, it is said, "They were probably descendants of the Medes, and dwelt originally in *Asia*, between the Don, the Volga (Volga) and mount Caucasus."

Hugh Murray's Encyclopedia of Geography, gives the boundary between Europe and Asia as follows: "The chain of Urals, running from north to south has been taken as the grand line of division; and is protracted to the Black sea by means of continuous portions of the great rivers Kama, Volga, and Don," and this boundary is recognized in his maps and throughout his work. The same bounds are also laid down in Mitchell's Universal Atlas, in Cotton's Maps, and others; and are also followed in the main, in Guthrie's Grammar of Geography.

On the other hand, Morse, Smith, Goodrich and others, have adopted the alteration, and make the Caucasian range, the shores of the Caspian and the Ural river the boundary. In Black's Atlas (English) the boundary is extended still farther South and East, so as to bring Georgia also into Europe.

Perhaps others, who have access to more extensive treatises on Geography will be able to assign a satisfactory reason for such changes, and if such reasons exist, it would afford much gratification if they could be generally known; but if the changes are arbitrary, what assurance have we that New England will not at some future time be set over to Europe or Africa, or be annexed to New Holland or Siberia?

AN INQUIRER.

REMARKS. The mountain ranges are made more use of than formerly by scientific geographers, and we believe the Caucasian and Uralian ranges are likely to be fixed upon as dividing Europe and Asia. Such is the representation in Johnson's splendid PHYSICAL ATLAS. See the map of the River Systems of Europe, and the Ethnological map of Europe.—So Mrs. Somerville in her Physical Geography, and Prof. Gayot in his admirable work, "The Earth and Man." In reality Europe and Asia are but one continent,—"the great continent" some geographers call it, and Europe is a sort of peninsula attached to Asia. But if we look for a natural dividing line, we must seek it in a *wall*, if there is one, or in what approaches nearest to a continuous wall.—[Eps.]

¶ The present number of this paper has been unavoidably delayed beyond the regular day of publication.

Plain Advice to Country Girls.

You know I said that I could quilt almost as fast as two of you. The reason is, I take care of my hands. One half of you are too proud to do this.—You would not be caught putting a glove on to sweep, or hoe, or weed in the garden, because you think it would look as if you wanted to be fine ladies. If you see any one taking care of her hands or careful to wear a sun-bonnet to preserve her complexion, you say she is "proud and stuck up." But it is you who are proud—too proud to think you require any care to look nice. You have an idea you look well enough at any rate. So you just make yourself as rough and coarse as ever you can, by way of being independent. Your hands grow as stiff and hard as if you held a plow and swung a scythe; and when you take a needle, you can scarcely feel it in your fingers. This is wrong. There are many things which women ought to do, which require their hands to be soft and pliable, and they should be careful to keep them so, in order to make them useful. Every woman who lives in the country should knit herself a pair of woollen gloves, with long fingers closed at the tops—no mitts, to let the fingers get hard. There should be a piece of ribbed work at the wrist, to make them stay on.

When you use your hoe, rake, or broom, put on your gloves—when you take hold of a skillet, pot, or kettle handle, take a cloth to keep your hands from being seared and hardened. When you wash clothes and dishes, do not have water so hot as to feel unpleasant. Many girls scald their hands until they can put them into water almost boiling. Such hands are unfit to use a needle or a pin. They are not so good to hold a baby or dress a wound. Take care of your hands, and do not forget your faces. I have seen so many country girls, who, at sixteen, had complexions like alabaster, and at twenty-six their faces would look like a runnet bag that hung six weeks in the chimney corner. One reason of this is, they do not wear a bonnet to protect them from the sun. Another reason is, the habit they have of baking their faces before a wood fire. I have seen women stand before a great roasting fire, and cook, until I thought their brains were as well stewed as the chickens; and they would get so used to it, they would make no attempt to shield their heads from the heat. Nay, they would sit down in the evening, and bake their faces by the hour; and this is one of the reasons why American women grow old, withered, and wrinkled, fifteen years before their time.

But another and the greatest reason is, your diet. People in this country live too well, and eat too much hot bread and meat. Country people usually eat richer food than those who live in the cities, and that is a reason why, with all their fresh air, their average age is little greater than that of city folks. Thousands of beautiful, blooming country girls make old, sallow-faced women of themselves before they are thirty, by drinking coffee, smoking tobacco, and eating hot bread. They shorten their lives by these practices about as much as city ladies with their fashionable follies. I do not know what you think about it, girls, but I think it is about as much a sin for wo-

men to get old, brown, withered faces, by eating too much, as it is for men to get red noses by drinking too much. Very few people think it a disgrace to have a bilious fever; but I had just as lief the doctor would tell me that I was drunk as that I was bilious. The one would come from drinking too much, the other from eating too much; and where is the difference! All this is a very serious matter, for it affects health and life; and the reason why I talk about your complexion in speaking of it, is, that every body loves to look well, whether they will acknowledge it or not. Now, people cannot look well unless they are well; and no one can be well very long who does not try to take care of herself. The woman who roasts her head at the fire, disorders her blood, brings on headaches, injures her health, and makes her face look like a piece of leather; when she swallows hot coffee, hot bread, greasy victuals and strong pickles, she destroys her stomach, rots her teeth, shortens her life, and makes herself too ugly for any use, except scaring the crows off the corn. J. G. S.

—Ohio Cultivator.

The Men to make a State.

And for the marks of men that are to make a State. *I see them in the ingenuous boy.* He looks right at you, with his clear, calm eye. The glow that mantles on his cheek is of no kin with shame; it is but virtue's color, spreading from his heart. You know that boy in absence as in presence. The darkness is not dark to him; for God's eye lightens it. He is more prompt to own than to do a wrong; and readier for amendment than for either. There is nothing possible for which you may not count on him; and nothing good that is not possible to him, and God.

I see it in the earnest boy. His heart is all a throb, in all his hand would do. His keen eye fixes on the page of Homer, or of Euclid, or Plato; and never wavers, till he sees right through it, and has stored its treasures in the light of his clear mind. His foot has wings for every errand of benevolence or mercy. And when you see the bounding ball fly highest, and fall farthest from the stand, and hear the ringing about that is the signal of its triumph, you must be sure that it was his strong arm that gave that ball the blow.

I see them in the reverential boy. He never sits where elders stand. His head is never covered when superiors pass, or when his mother's sex is by. He owns, in every house, at every hour of prayer, a present God. INGENUOUS, EARNEST, REVERENTIAL BOYS—these are our marks of men to make a State.—Bishop Doane.

"What constitutes a State?

No high raised battlements, or labored mound,

Thick walls, or moated gate;

Not cities proud, spires and turrets crowned,

Not bays and broad-armed ports,

Where, laughing at the storm, rich navies ride;

Not starred and spangled courts,

Where low-browed baseness wafts perfume to pride,

No. Men, high-minded men.

Men, who their duties know,
But know their rights; and knowing, dare maintain,

Prevent the long-aimed blow,

And crush the tyrant, while they rend the chain;—

These constitute a State."

THE AGRICULTURIST.

For the Vermont Agriculturist.

Facts in Chemistry—No. 3.

The result obtained by a minute analysis of air presents the following comparative weights of its elements :

Nitrogen gas,	7555
Oxygen gas,	2332
Watery vapor,	103
Carbonic acid gas,	10
	—10,000

This wondrous medium or atmosphere, containing the elements of life and destruction, enfolds the earth as a mantle, and although its limit cannot be fully ascertained, yet its weight has been calculated and its immensity is astonishing. It is equivalent to about fifteen pounds on each square inch of the earth's surface, and amounts in the aggregate to 5,287,350,000,000,000,000, tons.

The following statement will show the relative proportion by weight, in which the elementary and compound constituents of air are blended to produce this gigantic sum total :

Nitrogen,	3,994,592,925,000,000, tons.
Oxygen,	1,233,010,020,000,000, "
Carbonic Acid,	5,287,305,000,000, "
Aqueous Vapor,	54,459,745,000,000 "
	5,287,350,000,000,000 "

By measure, the proportions of oxygen and nitrogen are as follows. In 100 parts of air, about 21 parts are oxygen, and 79 parts nitrogen.

The elements of air however, do not effect a chemical combination, but are only mixed or mingled together. Some substances have a chemical affinity, that is, a tendency to coalesce and form a new substance. Thus soda and sulphuric acid have a strong tendency to combine, and when combined, the acid and alkaline properties disappear and a new substance is formed, viz., glauher salts, possessing properties of a character entirely distinct from either the acid or the alkali. So hydrogen gas and oxygen gas will combine, always in the same proportions and form water, which is a liquid, and of a character entirely distinct from gas. But in the composition of the atmosphere, there is no such change. The elements are simply mixed together and their properties undergo no alteration. The nitrogen serves to dilute the oxygen, and the union is somewhat similar to the mixture of water and alcohol.

With the substances named there is also a small amount of ammonia contained in the atmosphere, but its presence cannot be detected by analysis. It is always found in rain water however, and performs an important part in the economy of nature as a fertilizer.

Carbonic acid gas is composed of one part of carbon and two parts of oxygen, and though the amount in the atmosphere is comparatively so very small, yet principally from this source is obtained the carbon, which constitutes about one half of all the vegetable

substances on the globe. Carbonic acid is destructive to animal life, and its fatal effects have often been experienced by persons sleeping in rooms warmed by charcoal. In respiration, oxygen is taken into the blood through the lungs, combines with the carbon in the system and forms carbonic acid, which is thrown off as the air is exhaled from the lungs. It is much heavier than the atmosphere, and the effect of having such vast quantities thrown out, would be disastrous, were it not that Providence had introduced a law to counterbalance the evil. What is so destructive to animal life, constitutes the peculiar aliment of plants, and is no sooner thrown off by the animal, than it is seized and taken up by the vegetable; and what is very singular, it is done by a process analogous to respiration. The green leaves of plants are organs of respiration corresponding to the lungs of animals; and while by respirations, animals absorb oxygen, and throw off carbonic acid; plants during the day absorb carbonic acid and throw off oxygen, thus exerting a reciprocal influence to keep the air in a healthy state for the support of both.

The vital principle in plants however, is only active while under the influence of light. The workshop of Nature is closed and her operatives discharged as soon as the beams of day have vanished. The active absorption of carbonic acid, and the discharge of oxygen by the leaves which has been carried on through the day, ceases,

"Tis as the general pulse

Of life stood still, and Nature made a pause."

The vegetable, like the animal world folds itself to repose and yields to the influence of soothing slumber. Whether or not some plants nod their heads when night approaches and they become drowsy, as is asserted by Linnaeus, certain it is that some do fold up their leaves, and all vegetables suddenly ceasing to absorb and assimilate carbonic acid, that element is, during the night, thrown off by the leaves, though in much smaller quantities than it has been absorbed through the day. The rapid current being suddenly checked, a counter current is produced which is continued by the gradual relaxation of all the vital energies of the plant forcing off the super-abundant carbon which it had absorbed. The absorption of liquids by the roots also tends to produce the same results, and so of the great amount of carbonic acid absorbed, a part only is assimilated and made tributary to the growth of the plant. Thus "this carbonic acid which is poison to us is the food of plants, and of the whole vegetable world; they absorb it into their systems, and whilst they retain the carbon they emit the oxygen, and so feeding themselves they purify our atmosphere." We have here presented for our admiration and gratitude a magnificent display of the power and goodness of God, who hath created nothing in vain, and whose tender mercies are over all his works.

The absorption of carbonic acid and the liberation of oxygen however, is performed only by the green leaves, and the opposite process occurs with relation to the flowers, which have a variety of colors. For the most part they absorb oxygen freely, which by

uniting with other substances and forming acids, is supposed to impart to the petals the deep, rich colors, that they so often possess. After the formation and ripening of the seed, there is less carbon and more oxygen absorbed by the green leaves and owing to the oxydation which thence occurs, they gradually lose their verdure, and the brown tints of autumn succeed. The color changes from green, first to yellow, then to orange, red, and crimson successively, according to the quantity of oxygen absorbed. These brilliant hues, impart to our autumnal scenery, a variety and splendor, which mark the surpassing beauty of the Creator's pencil, and the excellency and perfection of all his works. AGRICOLA.

Agricultural Fairs.

The annual exhibitions of the County Societies in Vermont have been held within a few weeks. Of course we cannot crowd into our limits the particulars of these interesting occasions; nor need we, as our readers have access to the County papers.

On the whole, the reports are encouraging. The attendance of farmers has been large, and the articles exhibited in all departments such as indicate progress. Even in regard to fruit, unfavorable as the season has been, there are evidences of improvement, and a promise of fine shows another time. The most valuable imported breeds of cattle have been shown in different parts of the state, giving proof of increasing enterprise and zeal.

Notes on Plums.

Among the Plums grown here this year, we notice the following:—

YELLOW EGG. This makes a splendid show on the tree and at exhibitions, and is of the largest size: but the tree is not so prolific as some others. It is excellent for cooking, but too acid to eat from the tree.

DUANE'S PURPLE. Sometimes called in this vicinity the *Magnum Bonum*. It is a better plum than the *Magnum Bonum*, and no show can be finer than the ripening crop when well grown. It is of the largest size; the tree a moderate bearer, and the fruit tolerably good—not first rate.

GREEN GAGE. The genuine is not very common. Reckoned the best of plums. Hardy, but of slow growth.

IMPERIAL GAGE. The most prolific kind here this season, that we have noticed, and probably the best plum for general cultivation. When the tree is not too much loaded, and the fruit well grown and ripened, nothing can be more delicious. When too crowded on the tree, and not well ripened, they are often insipid.

ST. CATHARINE. A fine, rich, yellow plum, of medium size, of very excellent flavor when well ripened. The tree grows rather slowly, and makes a handsome compact head. Bears abundantly.

LOMBARD. Seasons of this plum have been set here for the peach plum. It is a hardy, vigorous tree, comes into bearing early, and the fruit is large, handsome, and abundant. One of the most promising

kinds for light soils—probably without a superior with us for the market.

BOLMER'S WASHINGTON promises well here, but only a few have been ripened.

Several other kinds prove hardy, and bear abundantly here; but probably the above will be found the best among the proved ones, for our soil and climate.

The curculios have been successfully fought by shaking the trees and catching them on a sheet.

Keep the Premises Clean.

Every cultivator should keep his premises as clean as possible, for the important purposes of saving manure and promoting health. Some discerning persons remark that in the hot summer, while vegetation is in a flourishing condition, it is more healthy in the country than in the city, but the reverse is the case in September and October, as at this season many vegetable productions have come to maturity, and are decaying, filling the air with noxious gases and odors. Hence arise fevers, dysentery, and other complaints, which are more common in the country early in the fall. We give this view of the subject, which some have presented, and we will make a few remarks on subjects that claim the particular attention of every cultivator, whether this view be correct or not.

Keep the premises, particularly around the dwelling, free from every substance that will taint the air.—Every decaying vegetable or animal substance should be removed a good distance, and then covered with earth, for the purpose of manure.

The pig-pen, though at a respectable distance, should be supplied with loam to absorb all liquid matter. All manure in the barn-yard should be covered with loam, sand, or mud, to save it from waste, and to keep the air pure, as, in the changes so common to the wind, the air is liable to be wafted from the barn to the house.

Cellars should be made as clean as possible, particularly as they communicate directly with the dwelling above, and any foul air produced in them is very liable to pass into the house. All vegetables in the cellar that are tending to decay should be removed immediately. It is best to ventilate cellars thoroughly by opening doors and windows, and to keep the door open as little as possible that communicates with the rooms.

Ground plaster and freshly burnt charcoals, set in vessels or strewed around in cellars, or other places where foul air exists, or is liable to be produced, has a very healthful effect, by absorbing gases.

Necessaries often produce a foul atmosphere around them; and as the dwelling is near, the offensive air is often wafted to it, and even when not perceptible, it is often operating injuriously. Some prepare these conveniences and cover them with loam, or other substance, so as to do away entirely with all unpleasant and unwholesome effects. When this is not the case, charcoals, plaster, chloride of lime, or other disinfectants, should be thrown into the vault, to absorb all noxious odors.

Water from the sink should be absorbed in loam,

&c. for manure, instead of rising in foul gases, and being blown into the house. There are some cases of malignant and fatal disorders going through a family, while all the rest of the neighborhood are in good health. This is often owing to some local cause, some foul puddle, pool, or stagnant pond, near the dwelling, or a general negligence as to keeping the premises clean.

Decaying weeds, grass, potatoes affected with the rot, potato tops, pumpkin and other vines, and various productions, are undergoing decomposition in the fall; and in the aggregate the amount is large, and filling the air with pestilential gases. Farmers may do much good to themselves and the community by burying all such substances, and converting them into manure. Make them into a compost heap, well covered with loam, to absorb the gases.—*N. E. Farmer.*

A Nice Potato Patch.

On reaching the capital of New Hampshire, knowing that Ex-Governor Hill, for the last ten years, has devoted himself mainly to agriculture, we were induced to call on him, to witness his success. This we do not doubt; for a man that once understood political management as well as he did, would be abundantly competent, if disposed, to cultivate the ground.

We had no sooner exchanged civilities than an invitation was given to accompany him on an excursion over his farm. The invitation was of course accepted. In a few minutes we were on a drive to his farm, lying mostly on the eastern side of the Merrimac river. His farm consists of three or four hundred acres of land—perhaps a sixth part of the rich interval on the west bank of the river, and the balance of sandy pitch pine land. The latter, till his own experiments with it, was deemed worthless for agricultural purposes, and cost him only about five dollars an acre, timber and all. The timber was worth more than the cost of the land. We believe it is five or six years since he began to cut the timber and to till the soil. Ten or fifteen acres yielded annually to the axe and the harrow, and a good crop of rye was the result.—Succeeding to this, the plow with a span of horses, and a subsoil plow with six oxen, among the roots and stumps of trees, upturned and loosened the upper strata, to the depth of sixteen inches. A muck bed in the vicinity contributed freely its fertilizing properties, and good clover rewarded the proprietor for his labor. Next in order comes a crop of potatoes; and it would be difficult for any one, who has not witnessed it, to realize, what skill and indomitable perseverance in agriculture can accomplish. Although we were delighted with his subsoil plowing then in progress; with a large rye field; with several Indian corn fields; with barns filled with hay that would have elated the largest farmer in the country; yet we most admired his potato field, on this pine timber land, which we had known from childhood, and considered worthless.

Perhaps of this description of land there were under cultivation, in the same or contiguous enclosures,

about sixty acres, and one-third of it composing the potato patch in question. Our impression is, that no manure had been used on it, but a compost made in the ordinary manner, and a moderate quantity of African guano; yet, what potatoes! We pulled up samples here and there all over the field, and found an increase upon the seed of about 30 per cent. in weight, and in some cases numerically; that is, 30 new tubers for the single one used for seed. What he has already dug, and from the produce last year of an adjoining patch, he estimates his crop this year at four thousand bushels. As soon as harvested, they are to be conveyed to Boston by railroad, a distance of sixty miles, and deposited in cellars till demanded in market, then yielding him, it is estimated,—such is their excellence,—at least one dollar per bushel; or four thousand dollars for the entire crop this season. What an example for the imitation of his neighbors and fellow-citizens! What an example, especially, for retiring politicians, and retiring merchants or professional gentlemen!

He stated that, in round numbers, the labor bestowed on his farm this year costs about seven hundred and fifty dollars, in addition to the use of his teams, which, if he hired them, might be two hundred and fifty dollars; making, in all, one thousand dollars. His expenditure for manures was not given; but we hope that on the termination of the harvest, he will give a full and authentic account of his farming operations. Such accounts are of immense value to the community. By them others will be stimulated to make similar efforts.

One word more. In the time of Queen Elizabeth, men of rank, to ornament their heads, wore heavy wigs, and to ornament their wrists and hands, they wore wide ruffles. Many of our old-school farmers, as if in imitation of that fashion, have allowed around their cultivated fields broad margins of brush wood and shrubs, doubtless for ornament; unless it be in kind charity to furnish a comfortable shelter for snakes, and skunks, and rabbits. In this matter, Governor Hill is an ultra radical. Instead of permitting such an ornament even on this sand land, about his potatoes, all is grubbed up; and, instead thereof, is a row of summer and autumn squash vines, which have furnished about fifty barrels of excellent fruit for Quincy Market.

FLEMING GROVE.

—*N. E. Farmer.*

GRAFTING UPON GRAFTS. At a late meeting of the Farmers' Club in New York, the Secretary read the following translation from the *Revue Horticole* of November last, published in Paris:—"The question of grafting upon a graft is decided.—Every one knows that when we have grafted fruit-trees, which afterwards show that their fruit is inferior, we re-graft on them. Such re-grafts grow perfectly well, and we are not mistaken in saying that this operation gives a sensible improvement in the quality and size of the fruit. The labor of Van Mons, and of Girardon, who for many years have experimented upon it, convince us that by this means very satisfactory results are obtained."

For the Vermont Agriculturist.

Raising Corn and Rye.

In relation to raising corn I would say a word.—In this fertile part of the State, especially on the beautiful streams which meander through our pleasant valleys, it is only necessary to prepare the land right in order to raise an abundance of corn from an acre, say from 80 to 100 or more bushels, instead of 30 or 40, with which farmers once were, and some still are satisfied; and the way to do it is something like this:—

Draw out and spread green barn-yard manure—no matter if there is considerable straw mixed with it—say from 30 to 40 loads to the acre, or the more the better. Then plow it under, seven or eight inches deep, so as to give the roots room to penetrate the soil to a good depth, and draw nourishment therefrom. Harrow faithfully both ways, so as to make the soil fine, and well pulverized. Furrow out the field into rows as near as it will bear, say, if it is furrowed both ways, which is rather better, three feet or so apart each way; though something depends on the soil and the kind of corn. Then put in a pretty good shovel full of rotten manure, or compost, and all is ready to receive the corn. With land thus prepared, a favorable season, and a thorough eradication of weeds, there is little doubt of an abundant crop. It is an abundant supply of manure which makes corn grow; and the more manure we put on, the greater will be the crop. We have tried manuring in the hill alone, and spreading it on green, either harrowing in or plowing it under, and in both ways have had good crops; but when applied both ways we have had better ones. There need be no trouble about manure if one will take pains to throw into the hog-pen or barn-yard all refuse matters he can collect, such as old straw, weeds, thistles, muck from the swamp, where most farmers can get a good supply, ashes (which should never be wasted or sold), &c. &c., and keep the stock close, or tied up, so that nothing will be lost.

Deep plowing is another thing of importance; and, in such an uncommon dry season as this has been, lands that have been plowed deep, suffer very little from drought, while those plowed one or two inches deep, as a neighbor of ours advocates, are very pale and sickly, because they cannot penetrate the soil for moisture and nourishment.

Last year we raised the best acre of corn, probably, in the county. It measured in the ear, when husked, 192 bushels of sound corn to the acre. We trust we may have some as good corn this year.

Shall I tell you how we have raised a good piece of winter rye this year! We two years since fenced off a couple of acres of pasture land (where we intend to have a good orchard of the best fruit soon), and then called in the sheep every night, letting them out in the morning, thus saving their manure where needed, instead of wasting it in the woods. One year since, we plowed it faithfully, and sowed rye the 1st of September, which has turned out as good a crop as we often see.

I would suggest whether it would not be well for

all farmers, who can, to yard their sheep every night in some pasture or field which they intend soon to plow.

F. B. P.

East Randolph.

Management of Muck.

But few operators seem to be aware that during the fermentation of dung much more than half its beneficial qualities are lost under the ordinary modes of exposure, and that by proper composting all this may be saved. Manures also require great subdivision in the soil, and this can only be attained by their being composted with some proper divisor. Lord Meadowbank is entitled to the credit of first having used muck or peat moss as a divisor, and although others had previously used the same materials as manures, they had not used them in as available a manner.

Every farmer knows that the wash of fertile fields, when collected in ditches or low spots is valuable as manure, but only those deposits of recent dates had been so used before the time of Lord Meadowbank; but since his successful experiments farmers have had their attention called to the use of deposits of great age. Many farms have low places containing a black spongy deposit of many feet thick, and although from the position of surrounding highlands it must be evident that this deposit is an accumulation of the washings of the surface of the surrounding country, still its use as manure was not thought of. Many argued that it was sour and cold, and would not readily pass into a state of fermentation, and therefore that it could not be profitably used as manure. The salt meadows of New Jersey, of which Essex county alone has 42,000 acres, are of this character; and notwithstanding the fact, that the *very highlands from whence the deposit forming these meadows has been washed*, was in sight and nearly sterile in consequence, still their proprietors seemed to have toiled on without availing themselves of the fertilizing materials within their reach. These meadows and all similar deposits are organic matter not in a state of decay, and until the excess of acidity they contain is neutralized, they cannot be fermented. The large amount of undecomposed vegetable matter in the form of root, fibre, &c., remains undecomposed, and the soluble and insoluble humus from the presence of acidity is unavailable. The question must occur to all, *Cannot this inert mass be so treated as to give it the properties of more recent deposits such as farmers use with advantage?* and if so, could it not be used as a cheap divisor for stable manures, thus rendering them doubly useful? We answer yes; all this may be done, and after fair experience we assert without the fear of contradiction, that these and similar deposits can be rendered, by proper admixtures, fully equal to a similar weight of barn yard manure.

Our plan is as follows: dig the muck during summer or fall, and leave it exposed in ridges to the effects of winter frosts, and the frequent freezings and thawings will render it pulverulent by spring. Then cart it alongside your manure sheds, and as it is laid outside the shed, mix with each cord four bushels of the salt and lime mixture recommended at pages 4,

60, &c., &c. In thirty days it will be rendered entirely pulverulent, and in this state may be used for composting under the shed as follows: Throw your stable and other manures under the shed daily, spreading them out thinly, and then covering with twelve times their bulk of this decomposed muck. The absorbent power of this muck will take up and retain all the ammonia given off by the stable manures, and as the heap increases, the whole mass will become equally heated. Make this heap four and a half feet high, and turn it once over at the end of thirty days after its completion, covering the upper surface with a fresh quantity of muck. This manure will be ready for use in three weeks after being turned, and every load of it will be found to be equal to a load of pure stable manure. In the stable, underlay the bedding with this muck, and the urine of the animals passing through the bedding will be received by the muck while it contains the animal warmth, and in this state the urine will decompose ten times as much muck as if applied to it after the animal warmth had left the urine. Remove this muck to the manure shed every ten days and supply a new quantity. We have a stable containing six oxen, and every ten days we place under them five half cords of prepared muck, removing the solid excrements every morning from the surface of the bedding, and thus the muck can only receive the urine. Under this arrangement the heat of the body of the animal, while lying down at night, assists the urine to decompose the muck, while its absorbent powers keep the bedding perfectly dry. This muck, on being removed each ten days to the manure shed, readily ferments, and is found to be fully equal to a similar quantity of stable manure.

Large quantities of this decomposed muck may be thrown to the hog pens and will be thoroughly mixed by the hogs with their manure, while its power of absorbing the gases given off will keep the swine in good health.

Hen and pigeon dung mixed with this muck will render large quantities available as manure for onions, turnips, &c., &c. When the spent lye of the soap boilers or other refuse of factories can be obtained and mixed with the prepared muck it will be found advisable so to use it.

A dead horse covered with ten bushels of unleached wood ashes and buried in twenty cords of this muck will render the whole mass a valuable manure.

Those who will use barn yards for cattle should have a deep place on one side of easy approach for carts, and keep it filled with prepared muck, emptying and renewing it occasionally; as the drainage of the yard will make more manure, and of an equal quality, than the solid excrement of the animals, muck placed loosely in a low place to receive the drainage will be better acted upon than if spread over the whole yard, as the treading of the cattle for any great length of time will render it too compact for fermentation.

Manures composted with muck renders clayey soils more free and consequently more cheaply tillable, while sandy soils are rendered more retentive of moisture and less liable to blow.

Butcher's hog-pen manure, when mixed with fifteen times its bulk of muck, is an excellent general manure after fermentation, and twenty loads of muck may be profitably mixed with one load of night soil.

For fruit trees this decomposed muck, with the addition of one bushel of salt to the cord, is preferable to any other manure.

Like charcoal dust, the prepared muck takes up and retains all the gases, and a single bushel per week thrown into a privy will prevent all disagreeable odor.

Composts made with muck should never be stamped or compacted in any way, but if they are found to be too hot by fermentation add more muck on top, and the resultant gases from below will be retained, rendering the new quantity of muck added fully equal to that below.

When composts are required for manure in a hurry, much time may be saved by the addition of ashes. Many farmers suppose that peat or meadow mud, pond or ditch scrapings, &c., may be decomposed and rendered useful by the addition of lime alone.—This is a mistake, and unless the land to which it is applied really needs lime, such a mixture will be found to have no beneficial effect except, perhaps, to mechanically disintegrate a clay soil.

Compost heaps and manure sheds are often placed for convenience in many parts of the farm, but in all cases where cattle yards are used, a compost heap should be adjacent to it, so that all the urine may be thrown upon it; for the liquid manures, as we have before stated, are more valuable than the solid excrements.

One great excellence attributable to decomposed muck and other carbonaceous manures, is that they hold the volatile portions of manures more tenaciously, and when spread out on the field are not so much injured by the effects of sun and air before being plowed under as many other kinds of manures. We made an experiment last year, which was most conclusive on the subject of exposure of manures. The manure was spread early in the morning of a very hot day on a piece of land, and from the absence of a plowman was left on the surface of the ground until afternoon, when it was plowed in, and at the time of plowing a similar piece of ground was manured with a similar quantity of manure and was plowed in immediately. The crop on the first piece of ground (late cabbages) was entirely inferior to that on the second, both having been treated alike except in the exposure of the manure before it was plowed. This spring the whole field was manured alike, but still a marked difference is to be observed where the manure was exposed last year.

When cattle yards and stables are so arranged as to save the urine, weeds may be prevented from reproducing themselves by wetting them in the compost heap with urine; this kills the seeds and secures by fermentation their entire destruction. When urine cannot be had, weeds should be liberally salted in compost.

Many suppose that salt will prevent proper fermentation, but is not the fact. It is true that very large

quantities of salt will preserve either vegetable or animal matter, but small quantities accelerate their decomposition.—*Working Farmer.*

Preserving Seed.

As the season has arrived when the various kinds of seeds are coming to maturity, the collecting and preserving of which is an important branch of agriculture, it is of the greatest importance to have sound and genuine seed, and we must not expect a good harvest without it. Imperfect and unripe seeds will sometimes vegetate and grow, but they will not produce healthy and vigorous plants. Many experiments have been made which go to show, conclusively, the superiority of full-grown and well-ripened seed.—Every farmer and gardener should raise his own seed, and then he will be certain that he sows that which is genuine. He should devote a small portion of his garden expressly to the raising of seeds, and much care and attention should be paid to this department of the garden. We all know how extremely perplexing it is to have seed fail of vegetating, or prove to be different for what it was planted for. In collecting and preserving seeds, only those that are full grown and well ripened should be kept for use; and they should be well dried before they are put away, and should be kept in a dry place. If seeds are kept in a damp place, or are put up moist, they are most sure to spoil before spring.—*N. E. Farmer.*

Lime and Salt Mixture.

In a former article on this subject, we stated that, for the purpose of making the chloride of lime, and carbonate of soda, as the resultants from the admixture of lime and salt, three bushels of shell lime should be slaked with one bushel of salt dissolved in water. Since writing the article above referred to, we have received a letter from a practical friend, stating that he could not use so large a quantity of the solution of salt with the lime, and that he had therefore been compelled to mix part of the salt in an undissolved state with the lime. He suggests, also, that we should further explain, to prevent similar difficulties arising with others.

If the three bushels of shell lime be hot from the kiln, it will take up as much water as is necessary to dissolve one bushel of salt; but if it be long exposed to the action of the atmosphere, it will not readily receive so large a quantity. In such case, we should advise that after the mass has been turned over, new portions of the solution of salt should be added each day, until the necessary quantity is combined. We have often met with the same difficulty, but have continued daily to add the solution of salt until the necessary quantity is combined. The undissolved salt which our friend has added, he will find combined after the mass has been several times turned over; but it will require more time to complete the combination.—*Working Farmer.*

INTERESTING FACT IN GRAFTING. Du Hamel, the celebrated French pomologist and horticulturist, ingrafted a young lemon, of the size of a pea, upon the

branch of an orange tree. It grew there, ripened, and had all the qualities of the lemon, without partaking of any properties of the orange. It is evident, in this instance, that the stalk of the lemon changed the color, taste, and smell of the juices of the orange tree. And from this experiment, we have reason to conclude, that all the different figures, colors, tastes, and smells, which we find in different plants, are formed in the plants themselves.

LONG VITALITY OF SEEDS. So completely is the ground impregnated with seeds, that if earth is brought to the surface from the lowest depth at which it is found, some vegetable matter will spring from it. I have always considered this fact as one of the many surprising instances of the power and bounty of Almighty God, who has thus literally filled the earth with his goodness, by storing up a deposit of useful seeds in its depths, where they must have lain through a succession of ages, only requiring the energies of man to bring them into action. In boring for water lately, at a spot near Kingston-on-Thames, some earth was brought up from a depth of three hundred and sixty feet: this earth was carefully covered over with a hand glass, to prevent the possibility of any other seeds being deposited upon it; yet in a short time plants vegetated from it. If quicklime be put upon land which from time immemorial has produced nothing but heather, the heather will be killed, and white clover spring up in its place. A curious fact was communicated to me respecting some land which surrounds an old castle, formerly belonging to the Regent Murray, near Moffat. On removing the peat, which is about six or eight inches in thickness, a stratum of soil appears, which is supposed to have been a cultivated garden in the time of the regent, and from which a variety of flowers and plants spring, some of them little known even at this time in Scotland.—*Jesse's Gleanings of Natural History.*

GARDEN FLOWERS. We are glad to see attention is now fully directed to the cultivation of the hollyhock, than which no flower more thoroughly merits the florist's care. Though it can scarcely be considered a border flower, from its large size, yet in the decoration of extensive pleasure grounds, there is no plant—not even the dahlia—so effective. The scenic effect of well grown and judiciously planted groups of hollyhocks is perfectly theatrical.

The dahlia is close upon the limits of perfection, thanks to the untiring perseverance of our florists; and if well kept up, will always be a first class florist's flower. Its proper situation is at the back of large borders, or in the foreground of shrubberies and along the edges of carriage drives. The hollyhock is best brought out into bold relief in positions where it can be seen from a distance; it should also be in groups or masses, and for the purposes of decoration, only light and lively colors should be chosen. Florists are fond of the very dark colors, perhaps on account of their greater rarity; but they do not show to advantage, neither are they usually such fine bloomers.

Another valuable decorative flower is the Antirrhinum.

num. This, too, is rapidly improving under floricultural art; it is dwarf enough for the parterre, and sufficiently gay for scenic effects. Its low growth makes it desirable for it to be planted on rising ground. It is an admirable rock plant, and its neatness, hardy habits, and brilliancy of coloring, render it available for all styles of decorative gardening. These few remarks will suffice to call more attention to decorative plants, which are fast rising in importance.—*London Chronicle*.

COMPARATIVE GROWTH OF PEAS. Mr. Thomas Mecham, of Philadelphia, made an experiment with several kinds of peas and noted the periods of their harvesting. They were all sowed on the 3d of April, in the same soil and situation, and grew, in every respect, under equal circumstances. The time when each produced pods, fit for use, stands opposite their respective names.

Prince Albert,	June 10th.
Bishop's dwarf,	" 17th.
Thompson's dwarf,	" 17th.
Early May,	" 21st.
Early June,	" 21st.
Early frame,	" 21st.
Early Charlton,	" 21st.
Royal dwarf marrow,	" 25th.
White marrow,	" 25th.
Black eyed marrow,	" 28th.
Blue Prussian,	" 30th.
Blue Imperial,	" 30th.
Banksian marrow,	July 2d.
New mammoth,	" 2d.
Dwarf sugar,	" 2d.

FENCE POSTS. A practical farmer informs the *Hartford Times*, that in taking up a fence that had been set fourteen years, he noticed that some of the posts remained nearly sound, while others were rotted off at the bottom. On looking for the cause, he found that those posts that were set limb part down, or inverted from the way they grew, were sound. Those that were set as they grew, were rotted off.

REMEDY FOR THE APPLE WORM. The apple worm is very destructive, generally; and in a year of scarcity, like the present, they injure nearly all the fruit. As a remedy, let small animals run in the orchard and eat all the fruit as it falls; or pick up all fallen fruit every day, and cook it for swine, or in some way destroy the worms contained in it. If old cloths be hung around the crotches of trees, the worms will take shelter therein, and may be destroyed. By carefully scraping off the loose bark of apple-trees in the spring, many chrysalids will be destroyed.—*N. E. Formur*.

ALPACAS FOR THE UNITED STATES. Mr. L. T. Brown, of the U. S. Legation, near Bolivia, has written to the Managers of the American Institute, of N. York, offering to procure alpacas, vicunas, llamas, for American agriculturists. Their cost in Bolivia is from three to five dollars each; but on account of the difficulty of transportation, they will be worth \$75 each delivered in New York.

The Markets.

BRIGHTON MARKET, July 26, 1849.

At Market—1125 Beef Cattle, 950 Stores, 4800 Sheep, and 1650 Swine.

PRICES—Beef Cattle—We quote extra \$6; first quality \$5 25 a 5 75; second \$4 75 a 5 25; third \$4 a 4 50.

Cows and Calves—Sales at \$18, 23, 27, 29, 31, and \$37.

Working Oxen—Sales at \$58, 63, 75, 80, 81, and \$95.

Stores—Two year old \$10 a \$15; three year old \$15 a \$25.

Sheep and Lambs—Small lots 1 33, 1 50, 1 71, 1 88 1 92, 2 25, and \$2 33.

Swine—Small lots to peddle, 3 $\frac{3}{4}$ c. a 4c. for Sows, and 4 $\frac{1}{2}$ a 5c for Barrows; one entire lot 4 $\frac{1}{2}$ c. At retail from 4 $\frac{1}{2}$ to 6c.—*Advertiser*.

CAMBRIDGE CATTLE MARKET, Oct. 10.

At market, 1900 Cattle; about 700 Beeves, and 1300 Stores, consisting Working Oxen, Cows and Calves, Yearlings, two and three years olds, &c.

PRICES. Beef Cattle—Extra, \$6; first quality, \$5 62; second \$5 25; third \$5; ordinary, at from 4 to \$5.

Working Oxen—60, 70, 75, 80, 90, 95, and \$100.

Cows and Calves—\$16, 20, 22, 25 and 35.

Yearlings—\$6 to 10; two years old, \$10, 12, 15, 9, 22 a 30; three years old, \$12 $\frac{1}{2}$, 18, 25 a 35.

Sheep and Lambs—3100 were at market—nearly all of which were sold. One lot of about 700 was sold at \$1 62 $\frac{1}{2}$, another lot of 500 was sold at \$1 54, other smaller lots sold at \$1 25 a \$3, according to quality.

Swine—3 $\frac{3}{4}$ a 4c. Retail, 4 $\frac{1}{2}$ a 5 $\frac{1}{2}$ c.

Remarks—The market was brisk, and good cattle sold readily at the above prices, but for ordinary, sales were rather hard.—*Courier*.

WOOL. BOSTON, October 11. American Fleece in good demand at quotations.

Prime Saxony Fleeces, wash'd lb.	42 a 45
American full blood do	38 a 40
do 3-4 do	35 a 37
do 1-2 do	31 a 33
do 1-4 and com. do	28 a 30
Extra North'n pulled lamb	36 a 38
Super do do do	31 a 33
No. 1, do do do	29 a 30
No. 2, do do do	21 a 23
No. 3, do do do	15 a 16
Smyrnia washed do	16 a 20
do unwashed do	6 a 11
Bengali unwashed do	7 a 9
Buenos Ayres do	8 a 20

—*Courier*.

FANEUIL HALL MARKET.

WHOLESALE.			
Beef, fresh, lb.	7 a 12 $\frac{1}{2}$	Eggs, doz.	60 a 16
Mutton, 1st qual.	6 a 9	Apples, barrel	2 50 a 3 50
do 2d	4 a 6	Beans, bush.	1 50 a 1 75
Lamb, lb.	4 a 8	Peas, bushel,	0 00 a 0 00
Veal, lb.	3 a 9	Potatoes, barrel,	2 00 a 2 50
Pigs, roasting, 100 a 1 25		Onions, bush.	75 a 0 00
Chickens, pair,	75 a 1 00	Honey in comb,	10 a 20
Turkeys, apiece, 1 00 a 1 20		SEED—RETAIL.	
Geese, mongrel, 1 25 a 1 50		Clover, North. lb.	12 $\frac{1}{2}$ a 00
Pigeons, dozen, 1 00 a 1 25		do Southern,	8 a 9
Pork, per 100 lbs. 5 50 a 6 25		White Dutch,	20 a 25
Lard, best, pr. bb. 7 00 a 7 50		Lucerne, or French,	33
Western, keg, 7 50 a 8 00		Herdsgrass, bush, 3 50 a 0 00	
Butter, lump, lb. 22 a 25		Red Top, bushel,	
do. firkin, 12 a 18		do Northern,	1 25 a 0 00
Cheese, new milk, 6 a 7		do Southern,	00 a 57 $\frac{1}{2}$
do. four meal, 5 a 6		Orchard Grass, — a 2 00	
		Fowl Meadow,	2 50 a 0 00

Cheap Method of Fattening Poultry.

Most people have noticed that at sunrise and sunset, all kinds of poultry eat voraciously, and I supposed that if they were kept in the dark (at which time of quiet, all animals fatten most), and the sunlight admitted several times during the day, and fed at that time, they might be induced to take on fat rapidly, and in this I was not disappointed. I fed them with rice boiled in milk, and sweetened with molasses, giving them water to drink but once during their confinement, and at the end of sixteen days I killed them—handsomer, and fatter birds I never saw.

J. B. D.

The method pursued by our correspondent, to fatten his poultry, is, with the exception of mixing grease of some kind with the food, one of the most rapid with which we are acquainted; but whether one of the best is quite another question. We never ate meat of any kind thus fattened, which was not soft, flabby, and tasteless; and we also think, unhealthy. The system of "box feeding," as it is termed, and at present getting into vogue rapidly in England, is very objectionable. They confine fattening cattle in boxes, almost as closely as our correspondent says he did his fowls. What is it that gives Southdown and Welch mutton its delicious flavor? It is the active habits of the sheep, combined with the superior sweet and nutritious grasses they feed on, which grows in their hilly and mountain pastures. The delicacy of the lean, tender meat of the game-cock breed of fowls, is owing, in a measure, to their active habits, and not being too closely confined when fattening. It is this, also, which makes the meat of all well-fatted game so delicious, such as venison, moose meat, pheasants, grouse, &c.—*Am. Agricult.*

Domestic Economy.

BRUSHING AND PRESERVING CLOTHES. If woollen clothing is very dusty, hang it on a "horse" or line, and beat it with a small rod, or cane. Lay it on a clean board, or table, and brush it well, first with a stiff brush, in order to remove the spots of mud, if any, and the coarsest of the dirt, and then with a softer one, to remove the dust and properly lay the nap. If the clothes are wet and spotted with dirt, dry them before brushing, and then rub out the spots with the hands. The hard brush should be used as little as possible, and then with a light hand, as it will, if roughly and constantly employed, soon render the garments threadbare.

Should there be spots of grease or tallow on the clothes hold a piece of ignited paper, a hot iron, or a coal of fire directly over them, sufficiently near as not to scorch the cloth, and they will immediately disappear by evaporation; or, lay a piece of thick brown paper over the spot, and press it with a hot iron. If the oil or grease stains the paper, put on another piece, and repeat the operation till it ceases to become soiled.

After the clothes are brushed, they should be hung up in a clean place, free from dust; if intended to remain unused for some time, they should be laid away

on the shelves of the clothes-press, or wardrobe, the place of which should always be in the driest situation possible, as otherwise they would not only acquire an unpleasant smell, but gradually become mouldy and rotten.—*Am. Agriculturist.*

TO KEEP A STOVE BRIGHT BY TWO APPLICATIONS A YEAR. Make a weak alum water, and mix British luster with it, perhaps two teaspoonfuls to a gill of alum water; let the stove be cold; brush it with the mixture; then take a dry brush and rub it till it is perfectly dry. Should any part, before polishing, become so dry as to look grey, moisten with a wet brush and proceed as before.

PEELING POTATOES. Poyen, the great French chemist, informs us that starch is not found in the epidermis, or in the tissues immediately subjacent, but that nitrogenized matters principally reside in these parts of the tuber. Hence a loss of the most nutritious portion of the vegetable is incurred by the common practice of peeling off the rind and parts underneath before the boiling commences. It should also be remembered that cold water dissolves, while boiling water coagulates, albumen. If potatoes, therefore, are thrown into cold water and gradually heated, much of the nitrogenized principles will be extracted before the water reaches ebullition, while if it be made to boil before they are introduced, the coagulation will cause these matters to be retained within the tissue of the vegetable.—*The Plough, the Loom, and the Anvil.*

THE BEST SOUP. Take one pound of beef, clear from fat or bone, to which add the same quantity of water. Let it remain over a slow fire until it boils, and then boil briskly for one or two minutes. Strain through a coarse cloth, and you have a soup as fine as can be made. The usual ingredients to flavor soup can be added. This is the recipe of the celebrated German chemist Liebig.

For cement to mend marble, mix the white of an egg with finely powdered quick lime.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy, - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " - -	3 00
16 " " " " - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

SCHOOL JOURNAL AND VERMONT AGRICULTURIST.

Vol. III.

WINDSOR, VT., NOVEMBER, 1849.

No. 7.

THE SCHOOL JOURNAL.

For the School Journal.

Suggestions to School Committees.

Much as has been said of the importance of securing able and competent teachers for our common schools, I fear that far too little attention is paid, in Vermont, to this important branch of school management. In very many, and I think that with truth I might say in most cases, the *price* is more considered in securing the services of teachers, than their *qualifications* for their business. Quod recipiat, non quod noscat. And, if a person will but offer his services *cheap*, he needs but little other recommendation for securing a station as teacher, than which there are but few of more importance, or attended with greater responsibilities.

A few more years will have rolled along, when many of those now being taught will themselves be teachers; when our national affairs will have passed into the hands of those who are now in the common schools receiving the elements of knowledge. They will be our counsellors, our magistrates, our ministers, and our rulers. How important, then, it is that their elementary instruction be such as to ensure a good foundation, upon which to build a fabric of science and knowledge; that the first principles taught them be such as to induce to worthy and noble deeds; that their minds, now tender and flexible, be so formed and bent that they will become matured in the symmetry of "perfect men."

It is true that the parents must impart the *first instructions*, and instil the *first principles*: The "*twig*" must be bent aright by them, or there is great danger that the "*tree*" will appear ugly in its native deformity. But next to the parent, the *teacher* takes the place of responsibility in this matter. It is for him to continue the work of disciplining and training the young mind. He should therefore be able to add keenness to the mental appetite, and supply proper food to be digested by the mental functions, or the mind will be very liable to sink into torpid indifference, and become loaded with that which is noxious and hurtful.

How essential, then, it is to our future well that well qualified persons be employed in the important business of teaching; and how inconsistent the conduct of those who make the *price* the main thing to

be considered in hiring their teachers. It is true we should study "*economy*" in all things; but that seems to me like poor "*economy*" which hires a person to undo in a single term the work of years, merely because he will do it *cheap*. "We are poor, and our school is small," is often heard as a plea for hiring teachers cheap. And are you, I ask, so poor that you can afford to pay out \$45 or \$50 and receive little or no benefit, rather than \$60 and reap an ample reward? Is your school so small that your children may not, unless rightly taught, grow up in ignorance and vice? So small that you are willing to run the risk of their being led astray, and expose them every day to dangerous or unknown influences; that they may not, through such influences, and for want of proper instruction, become curses instead of blessings to the social and domestic circles, and to the community to which they belong; that they may not by their misconduct bring down your "grey hairs with sorrow to the grave"? Does your poverty free you in the least from the responsibility of training them, and having them trained in the way in which they should go? Let me ask you to consider these things carefully before you act in this matter. O, remember that there is no neutral ground for the mind of your child to stand upon. If it is not being trained in the right way, then are its faculties assuming a downward and wrong direction. It seems to me that it would be far better that it should grow up without a shadow of learning, than under the care of such teachers (and many such there are) as labor solely for the paltry sum for which they are engaged; having no sense of their responsibility, and having no power or even desire of elevating the minds of their pupils towards that standard for which their Maker intended them.

But is this plea of poverty really sincere? Judging from appearances, I should think not. When we visit those neighborhoods from whence it comes, we commonly find that the flocks, the herds, and the swine, are, at no slight expense and labor, provided with careful keepers, whose only care is to see that their short-lived bodies suffer no decline, while, in too many cases, the imperishable minds of the children are committed to the care of *unlearned* and *unprincipled* hurlings, who, often, being destroyed, both as to their usefulness in this world, and happiness in that which is to come.

May we not hope soon to witness a reform in this

matter, and behold Vermont standing at the head of her sister States, even in point of education! Let every citizen consider this question—consider it, both for the sake of his own happiness, and also that of the rising community, and for the weal of his State and Country.

D.

Examination of Teachers.

What shall be done when a candidate comes for examination with a statement that he has already engaged a school? The examiner is often tempted to say that he will have no responsibility in regard to that school. The examiner's position is delicate enough, at the best, and there ought not to be added to his embarrassments the consideration that a Committee has already prejudged the case. As a general rule, the first question put to a candidate for employment by a district committee should be, to ask for a certificate. The want of one should be a bar to further proceedings. Let this be understood as the rule of action, and those who wish to teach will prepare themselves accordingly.

We say this should be the general rule—to be departed from only in cases where the teacher is well known, or so recommended as to admit of no question in regard to qualification. And even then, unless circumstances should render it very inconvenient, the certificate should be had before any engagement is entered into. Only those who have had occasion to act as examiners can fully appreciate the importance of this rule.

Candidates for employment should be examined together, in as large classes as possible. Teachers' Institutes furnish good occasions for the examination of large numbers at a time. The same may be done at Academies, where there are many who expect to teach. In such cases, the county superintendent should be present, with as many of the town superintendents as can make it convenient.

When a county or town superintendent gives notice of a time and place for examining candidates, the candidates ought, by all means, to attend. Examiners ought not to be called upon at other times—at any hour of the day and on any day of the week, as this or that candidate may choose. They have not the time to spare. They may have otherspecial engagements. They are under no obligation, after having given the notice referred to, to be at the command of candidates at all other times; nor can the public be so well served in that way.

As to the manner of examination, we publish in another column an account of an examination in Ohio, which may be quite as useful to candidates as to examiners.

Boarding Round.

When will the time come when teachers of our common schools can have a steady boarding place? Until this is the case, I am persuaded that our schools will not arrive to perfection. For what teacher can take that interest in the school, when nightly, he is obliged to seek a home "yet again."

Do we hear of teachers of select schools boarding

round? No, to have this would be thought impracticable; and are not our common schools of as much importance? Else, where the foundation of our Academies? Are they not founded upon our public schools? If this were not the case, our Academies would cease to be Academies, and be ranked among the primary departments. Hence, I ask, why it is not equally necessary that the teachers of our common schools, should have a steady boarding place? Let this be answered, and if it is not candidly decided, then it is because it is seen through the "wrong end of the telescope."

The practice of boarding round, is acknowledged by some to be barbarous; and what! do we recognize barbarity in this civilized part of the world! Some have it for an excuse, that they want to become acquainted with the teacher. But must the teacher, when night comes, weary with fatigue, go from place to place, that the parents may form acquaintance with him, when they in return, stand off from visiting the school, with frozen hearts, and with feelings indifferent, or adverse?

Another reason why teachers ought to board round, is, it is said, to become acquainted with the children; but I would not give one farthing to have a longer time to become acquainted with the children, than the time in school. And as for a teacher going round to acquaint himself with the children, I regard as wholly unimportant. And if, when boarding round, the teacher is not free to converse, they call him stupid, and dull, and for him to spend the evening in reading, they would consider a mark of disrespect.

I ask then again, why cannot teachers of our common schools have steady places for board? Must it be that they are to be compelled to go from house to house, seeking rest, but finding none? And so it is.—*N. E. R. Herald.*

RESPONSIBILITY OF EACH THE HAPPINESS OF ALL.

It is an era in life when first the conviction strikes home to our hearts that our actions tell on the happiness, not of ourselves only, but of our fellow-creatures. Life has frequently been likened to a theatre, in which "the men and women are only the players;" but when we come to consider this illustration carefully, when we perceive that in the drama of life, as in that of the stage, every one has some part to act, and that in both the good or bad performances of even the most insignificant actor tells in a degree on all the rest, it is startling indeed. Is it impossible to impress this even on the minds of children? Is it impossible to lead them in early youth to reflect upon the great, the awful truth, that all are placed in this world as actors, not as spectators; that the little and great, the rich and poor, the young and old, in that one point are in the same position; and further than this, that we are not only all actors, but also that every human creature is accountable to his Almighty Father for the due performance of the part assigned to him, and likewise for the proper use of the influence which he is permitted to exercise over others? If there be a doubt in a child's mind as to the effect producible by the conduct of one person on

the happiness of many, let him be taught to observe how a cross look, an angry word, may destroy the peace of his own domestic circle for great part of an evening; and then let him reflect how any graver fault must affect the happiness of the transgressor's family, and throughout of those in close connection with it.—*School-room Days.*

The following is from a little work by Professor Sullivan of Dublin,—his outline of the general regulations and methods of teaching in the Male National Model Schools:

Orthography.

Teachers, instead of occupying the time of their pupils in the useless drudgery of committing to memory the uninteresting and endless columns of a dictionary, or spelling-book, are strongly recommended to adopt the improved method of teaching orthography namely, by *dictation*. It is simply this: the teacher reads a sentence from a book, or dictates one of his own composing to the pupil, who either writes it down verbatim, or merely spells the words as they occur, as if he were writing them down. This *practical plan* of teaching orthography, does not, however, entirely supersede the use of spelling-books. There should at least be a *text-book* on the subject, which the pupil may be made to consult when necessary, and to which even the teacher may occasionally refer with advantage. The *text-book* should contain, either in columns, or in sentences formed for *dictation*, almost all the words in the language which are liable to be misspelled, such as:

1. Words similarly pronounced, but differently spelled.
2. Words similarly spelled, but differently pronounced and applied.
3. Words spelled and pronounced alike, but differing in signification.
4. Practical rules for spelling.
5. All words of unsettled orthography.

These words and sentences in which they occur, or are worked up by the teacher, should be dictated to the pupils, who should either spell every word as it occurs, or if they are competent, write down the entire sentence on their slates. The latter mode is preferable, for no person arrives at accuracy in spelling till he has had frequent occasion to write.

In the absence of a *text-book*, containing the difficulties of orthography, the teacher must have recourse to the *reading books*. Let him make his pupils spell and explain the words at the head of each lesson, before commencing to read it; and after the lesson is over, let him direct them to close their books, and spell any word or sentence he may select from it.

The practical superiority of such a plan is obvious. For the language of letters, and of composition, in general, consists of such combinations of words as occur in the pages of a *reading-book*—not of words syllabically and alphabetically arranged, as we see in the columns of a *spelling-book*. Let the reader who may be disposed to dissent, dictate in the manner recommended, a few familiar sentences to a young person who has learned orthography from the columns of his

spelling-book only, and, unless we are greatly mistaken, the inferiority of the old plan will be evinced by the erroneous spelling of some, perhaps, of the easiest and most familiar words.

But how, it may be inquired, are children, without dictionaries or spelling-books to learn the *meaning* of words? By being accustomed to give, in their own language, their own ideas of every unusual and important word which occurs in their *reading-lessons*; the teacher, of course, correcting them when wrong, and explaining to them, when necessary, the proper meaning of the term in question; or referring them for this information to their dictionaries, which should always be at hand for this, their legitimate use.

ARTIFICE OF THE NINE-KILLER. A small bird of the hawk kind, called the nine-killer, has been observed at particular seasons of the year to catch grasshoppers, beetles, or other insects, kill them and stick them in a position entirely natural, upon the branches of trees or bushes, so that they appear, at first sight, as if alive. It is a common opinion where this bird is found, that it thus destroys nine insects every day, and hence its name; but as it is known not to feed upon insects itself, but principally upon small quadrupeds and birds, the object of this expedient is not perfectly obvious. Some have supposed that it was done merely for amusement. The most probable explanation, however, is that the insects are intended by this little hawk as a decoy for the birds which it designs for its prey. This manoeuvre is put in practice in the fall of the year, just before the severe frost begins, which by killing the insects deprives smaller birds of the food on which they have been accustomed to subsist. They are of course, in the season of scarcity, led to the bait their sagacious enemy has provided, and thus become an easy prey.—*Smellie's Philosophy.*

POWER OF EXPANSION IN ICE. The general law is, that all bodies are expanded by heat, and contracted by cold. But by that law, ice, as it forms, would sink to the bottom, and our streams freeze solid. A correspondent of the *Montreal Herald*, lately experimented on the expansive powers of freezing water, with the following result:—

He filled a 24 pound shell (the diameter of which was 5.547 inches, and about $\frac{1}{3}$ of an inch in thickness) with water, and plugging up the hole securely, exposed it to the action of the frost during one of our keenest nights this winter. In the morning he found the mighty power had divided the iron mass into four sections, one of which, weighing four and a half lbs., was thrown twenty and a half yards, and must have passed upwards over a wheel behind which it had been placed—the ice remaining in the section left behind appearing as if it had been pounded.

It is not what we earn, but what we save, that makes us rich. It is not what we eat, but what we digest, that makes us fat. It is not what we read, but what we remember, that makes us learned. All this is very simple, but worth remembering.

Directions and Instructions for the Teachers of Cincinnati Central School.

BY H. H. BARNEY, THE PRINCIPAL.

1. They shall endeavor to understand thoroughly whatever they attempt to teach, so as not to be constantly chained down to the text-book; to this end, they shall make such a special preparation for each lesson, that they could recite it themselves, as readily and accurately as they would desire their pupils to do it.

2. They are to teach the subject, and not the book; to point out the practical bearing and uses of the thing taught, and make it so familiar by repetition, as to fix it deeply and permanently in the mind; for what is worth learning at all, is worth learning thoroughly and completely.

3. They are to assign no larger portion for each recitation than the class, with due diligence, can easily master, and then insist upon its being learned so perfectly that it can be repeated without the least hesitation; until this is done, no new portion is to be given out.

4. They are to explain each new lesson assigned, if necessary, by familiar remarks and illustrations, that every pupil may know, before he is sent to his seat, what he is expected to do at the next recitation, and how it is to be done, to the end that he may study understandingly, and, therefore, with spirit and pleasure, and make rapid progress.

5. They are to require all rules and definitions, together with the more important parts of each subject of study, to be accurately committed to memory, and the whole wrought into the understanding as well as the memory of the pupil, by questions and familiar illustrations adapted to his capacity, until he has completely mastered it.

6. They are not to use during recitation the text-books themselves, excepting for an occasional reference, nor permit it to be taken to the recitation seat to be referred to by the pupils, excepting in the case of a parsing exercise, the translation of a language, or the solution of mathematical problems; and even in the latter case, they are required to assign many problems of their own preparing, or those selected from kindred text-books, involving an application of what the pupils have learned to the business of life; for the reason that they will be likely to possess more animation themselves, and enkindle a correspondingly increased vivacity and spirit in the mind of their pupils, than if obliged to follow the very letter of the book.

7. They are to understand many more subjects than they are required to teach, that they may be able at all times to give much oral, collateral, and indirect instruction, and be furnished on every subject, with copious illustration and instructive anecdote; to this end, they are expected to pursue, daily, a regular course of professional reading and study.

8. They are not to do for their pupils what they, with proper explanation, can do for themselves, or what some member of their class can do for them; they are not to carry their explanation so far as to supersede the very effort on the part of their pupils,

which it should be the design of such explanation to encourage; but they may diminish or shorten difficulties, divide and subdivide a difficult process, until the steps become so short that the pupil can take them without difficulty.

9. They must endeavor to arouse and fix the attention of the whole class, and to occupy and bring into action as many of the faculties of their pupils as possible. They are never to proceed with the recitation without the attention of the whole class, nor go round the class, with the recitation, always in the same order, or in regular rotation; but to change the order frequently, selecting here and there a pupil, who may chance to be listless at the moment, so that all may be compelled, as it were, to be attentive, and ready to recite at any moment.

10. They are to exhibit proper animation themselves, manifesting a lively interest in the subject taught, avoiding all heavy, plodding movements, all formal routine in teaching, lest the pupil be dull and drowsy, and imbibe the notion that he studies only to recite, using his text-book as mere words, and having but little idea of any purpose of acquirement beyond mere recitation.

11. They must require of their pupils, at all times, prompt and accurate recitations, under penalty of detention after the close of the regular school hours, to make up the deficit. They are to endeavor to use language fluently and correctly, and to acquire a facility at explanation, a tact at discerning and solving difficulties; they must endeavor so to unfold, direct, and strengthen the mind as to bring out all its powers into full and harmonious action, and so to superintend the growth of the moral, mental, and physical faculties, as to develop them symmetrically, and fashion the whole into beauty and loveliness as they grow.

12. With respect to most subjects of study, they are required to have their pupils recite by *analysis*—that is, to give, in their own language, a general outline; a consecutive synopsis of the subject matter of the lesson;—to be followed by general, appropriate, original questions, pointing out and illustrating its practical bearing, exciting curiosity, and awakening thought; but in no case are the questions in the margin or at the end of the sections in the text-book, to be used, excepting for the purpose of an occasional review.

13. They are to keep a daily record of the merit of each pupil's recitation, his deportment, cleanliness; and the number of times absent or tardy; the quality or merit of each recitation or exercise being marked at the time of its performance, on a scale varying from 10 to 0; 10 denoting perfect; 8, good; 6, tolerable; 4, quite poor; and 0, an entire failure: to make a monthly abstract of the same, and transmit it to the parent or guardian, to be signed by him, and then returned by the pupil to his teacher.

14. They are not to rely too much upon simultaneous recitation, as it often takes away all individuality, making the pupil superficial, by causing him to rely on others, tempting him to indolence, by preventing his deficiencies from standing out by themselves;

and consoling him with the reflection that he has been able to conceal his want of thoroughness. It may be resorted to, however, for the purpose of giving, occasionally, variety to the exercises, of arousing and exciting the class when dull and drowsy, or for the purpose of fixing in the mind important definitions, useful tables of weights and measures, the declension of nouns and pronouns, the conjugation, synopsis, and inflection of verbs, etc.; and also in certain spelling, reading, elocutionary, or orthophonic exercises, where the object is to embolden the pupils, to induce them to let out their voices, that their muscles of articulation may be strengthened, and all the vocal organs become well developed, and the voice rendered full-toned, firm, and harmonious.

15. They must not attempt to teach too many things at once, nor allow their pupils to direct their own studies, nor attend to extraneous business in school hours, nor occupy too much time in conversing with visitors, nor make excuses to visitors for the defects of their classes, nor use low and degrading epithets, nor wound the sensibilities of a dull scholar by disparaging comparisons.

16. They are required to see that their pupils move to and from the recitation room in a particular order, and always occupy the same place on the recitation seat, that if any one be absent, it can be detected at once, and the cause, if necessary, be immediately inquired into, and the proper entry made in the class register, without calling the entire roll.

17. To avoid those dull and dragging recitations which always abate the interest of a class, and sooner or later create a disrelish for study, they are not to allow the pupils to prompt each other, nor help the class themselves by unreasonable suggestions or continual hints, or by what is termed the "drawing-out process," which always reproduces the very dullness which they seek to remedy, the very imperfection which they desire to remove; but they must refuse to proceed until the recitation can go alone, progressing briskly from pupil to pupil, passing by those who hesitate and falter, until the whole lesson is finished; for it is as easy to have good lessons as poor, if teachers have the energy to insist upon it, and it is a great saving of time to have the lessons promptly recited.

18. They are enjoined to make themselves thoroughly acquainted with some work on mental philosophy; because education, more than anything else, demands not only a scientific acquaintance with mental laws, but the nicest art in the detail and application of means for its successful prosecution; because there is a natural order and progression in the development of the faculties, a principle running through every mental operation, without a knowledge of which, and how to apply it, the teacher cannot know beforehand how to touch the right spring, with the right pressure, and at the right time; because it is indispensable that every teacher should know by what means, by virtue of what natural laws, the human faculties and powers are strengthened or enfeebled—should know that each faculty has its related objects, and grows by being excited to action through the stimulus or instrumentality of its appropriate objects, and

is thereby strengthened so as to perform its office with facility, precision, and despatch; and because the teacher, like every other workman, should understand the natural propensities, qualities, and power of the subject matter of his work, and the means of modifying and regulating them with a view to improvement, otherwise he would be continually liable to excite and strengthen the wrong faculty, to touch the wrong spring of action, and to promote animal and selfish propensities, instead of social and moral sentiments. "No unskillful hand should ever play upon a harp, where the tones are left forever in the strings."

Least Common Multiple.

The subject of the least common multiple stands in somewhat the same relation to fractions as that of the greatest common divisor. Unless it is understood, it is impossible for the pupil to comprehend fully the reason of the process for reducing two or more fractions to the least common denominator.

In teaching this subject, the first step is to give the pupil a clear idea of a *multiple* of a number. In doing this, such questions as the following may be asked:—

What number is a multiple of 3?

Why is 6 a multiple of 3?

Name several numbers that are multiples of 3.

Name several numbers that are multiples of 5, of 7, and so on.

The second step should relate to a common multiple of two or more numbers; and in connection with this, exercises like the following may be employed:—

Name a common multiple of 2 and 3.

Name other common multiples of 2 and 3.

Why is 12 a common multiple of 2 and 3?

Why is 20 not a common multiple of 2 and 4?

Name several common multiples of 2 and 4, of 4 and 5, of 2 and 5, and so on.

Let it be shown that for any given numbers an unlimited number of common multiples may be found, of which the smallest is termed the *least common multiple*.

Having shown what the least common multiple is, the next step is to show that the least common multiple of two or more numbers must contain all the prime factors in those numbers. Thus, any common multiple of 3 and 4, which are the same as 3 and 2×2 , must contain the prime factors, 3, 2, and 2; for if it does not contain these factors it will not be divisible by both 3 and 4. After this it is easily shown that the *least common multiple* must contain *only* the prime factors in the different numbers, and that when two or more of the numbers, of which it is required to find the least common multiple, contain a *common* prime factor, it must be taken *only once* in selecting the prime factors to form the least common multiple. Thus, if it were required to find the least common multiple of 6 and 10, we observe that $6 = 2 \times 3$, and $10 = 2 \times 5$; now 2 is a prime factor common to both numbers, and to get a common multiple of both numbers, it is necessary to take the factor 2 *only once*.—Omitting 2, and taking the product of the remaining

factors, we have $2 \times 3 \times 5 = 30$ for a common multiple of 6 and 10. Now this is a common multiple because it contains *all* the prime factors that are found in either of the given numbers, and it is their *least* common multiple because it contains no prime factor not wanted in dividing by one or the other of the given numbers.

When the subject is thus presented to the pupil, it is easy to explain the method of finding the least common multiple, by separating the given numbers into their prime factors, and this is the method, the nature of which the pupil can most easily understand.

The other method of finding the least common multiple, viz., by arranging the given numbers in a horizontal line, and then dividing by any *prime* number that will divide two or more of them without a remainder, etc., depends on the same principles as the first method, and is easily explained when that is understood.

It is proper to observe that the rule given in a number of arithmetics for finding the least common multiple, is defective. The direction is to arrange the given numbers in a horizontal line, and then divide by any number that will divide two or more of them without a remainder, etc. Now this rule will always necessarily give a common multiple, but in many cases it fails to give the *least* common multiple. The cause of the failure in any particular case can be readily pointed out by any one who understands the principles on which the rule is founded.—PAOF. RAY in *School Friend*.

Examination of Teachers.

BY A COMMITTEE IN OHIO.

The forenoon of the 27th of April was occupied in the examination of a class of one hundred and two members, in separate divisions, by each member of the Board. Each applicant was examined orally in Reading and Orthography, and all the correctly, incorrectly, and not answered questions recorded against the name of each applicant.

In the afternoon the following list of questions was presented to each applicant, also a blank sheet upon which answers were to be written. Remarks, specifying the mode of testing the recorded answers, the time when they were to be presented, &c., were made by the Board. Each applicant then, furnished with the necessary conveniences, recorded the name, age, and number of years' experience in teaching, then the answers as far as they were able:

QUESTIONS IN GRAMMAR.

- 1st. Is a teacher, who can secure the respect and willing obedience of pupils, practically qualified?
- 2d. Write the above question, and place the proper punctuation points.
- 3d. Is it a simple or compound sentence?
- 4th. Write the name of each part of speech in the first question, in the order of its occurrence.
- 5th. What verb agrees with teacher?
- 6th. Write all the expressions that modify teacher.
- 7th. Write the verb secure in the subjunctive mood, pluperfect tense, third person plural, passive voice.

- 8th. Write the expressions that modify obediegee.
- 9th. Write the other verb in the indicative mood, active voice, perfect tense, first person singular.

GENERAL QUESTIONS.

- 1st. Do you think works on the practice of teaching, school journals, &c., useful!—With what ones are you familiar?
- 2d. In what ways do you design to instruct young pupils who do not spend much time in study?
- 3d. What motives to diligence and good behavior will you present to youth?

ARITHMETIC.

- 1st. Write in figures sixty millions six thousand and sixty.
- 2d. Point the above; and write the name of the sixth period in any given number.
- 3d. Write six thousand and sixty in Roman characters.
- 4th. Perform and explain the following example, 647—439.
- 5th. Find the expression for five yards of lace in the lowest denomination.
- 6th. Is the reduction ascending or descending in the preceding example?
- 7th. Add three-fourths, and four-fifths, and five-sixths together.
- 8th. From seven-eighths take one-half of three-fifths.
9. What is the interest of \$4.04 for four years four months and four days, at four per cent.?
10. Involve 49 to the second power.
- 11th. Find the square root of 4489.

GEOGRAPHY.

- 1st. What are the Poles of the Earth?
- 2d. Describe the Equator.
- 3d. Write the boundary, rivers, mountains, capitals, chief towns, and climate of France.
- 4th. Name the countries of South America.
- 5th. Describe the principal lakes in North America.
- 6th. What can you say of the Chinese Empire?
- 7th. Where is New Holland?
- 8th. How is Asia bounded?
- 9th. Where are the West Indies,—their climate and productions?
- 10th. Name and describe the largest city in Pennsylvania.
- 11th. What divisions of climate do Geographers make?
- 12th. Write the boundary, rivers, capital, productions, and means of education of Ohio.

PHYSIOLOGY.

- 1st. How many bones compose the human skeleton?
- 2d. Are the bones composed of animal or earthy matter, or of both?
- 3d. To how many degrees should a school-room be heated in order to secure comfort and health?
- 4th. What are the principal organs concerned in breathing or respiration?

HISTORY.

- 1st. In what year was the last war declared against Great Britain?

2d. When did Washington become the seat of the General Government?

3d. In what year was the first settlement made in Ohio?

4th. Into how many counties is Ohio divided?

5th. Who is the present Governor of Ohio?

The papers containing the answers were presented for examination between the hours of 5 and 7, P. M.

For every error in reading, orthography, history, and physiology, one degree lower was marked upon the certificate. For every two errors in grammar, arithmetic, and geography, one degree lower in the scale. On failure to answer any questions in any branch, the name of that branch (which is printed on the certificate) was erased. Then, finding the number of errors contained in all the branches, and comparing them with the number of questions proposed, the following rules were adopted to limit or extend the time of the certificate:

If five errors or less appeared in the examination in all the branches, the certificate was granted for the longest time allowed by law (two years). There were of this class sixteen applicants. If from five to ten errors, eighteen months continuance. Of the second class there were twenty-nine. If from ten to fifteen errors, twelve months certificate. There were of the third class thirty-eight applicants. If from fifteen to twenty errors, six months certificate. There were of the fourth class fourteen applicants. If over twenty errors, no certificate was granted. Of the fifth class there were five applicants.

Of those who applied, there were five under sixteen years of age; fifty-eight over sixteen and under twenty; twenty-nine over twenty and under twenty-five; and ten over twenty-five. Forty-seven had never taught, thirty-six had taught three quarters or less, and the remaining fifteen had taught on an average eight quarters each.—*Ohio School Journal*.

School Houses.

The following remarks of Mr. Sanborn of Hanover in the New Hampshire House of Representatives, contains too much good sense to be lightly passed over and disregarded. Every man and woman who has ever been at school in New England, can feel and appreciate the truth of similar observations. They ought not to be forgotten:

"The house where many of the best hours of life are spent should be made attractive to the eye of youth. The young mind is moulded by the object it contemplates. What is it that throws such an enduring charm about 'sweet home'? It is undying recollection of childish joys, of parental love, of little domestic scenes, which are forgotten by all except the child who participated in them. If the school room be made agreeable and comfortable, the child will love it as he does his home. Let every father who sends a child to the town school examine the house in which his child is imprisoned for six hours in a day, for nearly ten years of his life, and see if he cannot detect there some *maternal* reasons why his child hates the old school house; hates the master; quarrels with his associates, and refuses to learn.

Many a child has been whipped for his aversion to school, when, if strict justice were administered, the parent should have been whipped for sending him there. It is the parent's duty to see that the school house is *inviting*; that it is properly *warmed* and *ventilated*, and provided with all the apparatus and furniture necessary for a child's comfort. In many of our school houses, children are suffocated by bad air. It is the opinion of the most eminent physicians, in our country, that many chronic diseases are engendered in our ill constructed school houses; that the seeds of consumption are planted in many a delicate child, by inhaling the noxious air of an imperfectly ventilated school room. If the people understood the laws of health, would they thus torture their children and make their life one long continued disease? Is money of any consideration when weighed against health and happiness? Ought we to be governed by motives of economy and parsimony in withholding from the people the information necessary for the remedy of these evils? Do we mean to sacrifice our children to the Moloch of avarice? Do we intend to confine another generation to those modern Black Holes where the air is for a large part of the day, as deleterious to health and life as the malaria of Compagna? If we do not, let us take proper steps to disseminate light upon the subject."

The real object of education is to give children resources that will endure as long as life endures; habits that will ameliorate, not destroy; occupations that will render sickness tolerable, solitude pleasant, age venerable, life more dignified and useful, and death less terrible.—*Rev. Sydney Smith*.

A man that I admire very much, and have met with occasionally, is one who is always of use in any manner he is mixed up, simply because he wishes that the best should be got out of the thing that is possible.

CREATIVE DESIGN. Lord Bacon assigns to science a two-fold object, the relief of man's estate, and the glory of the Creator.

DEEDS ETERNAL.

The deeds of reasonable men,
As if engraved with pen of iron grain,
And laid in flinty rock, they stand unchanged,
Written on various pages of the past—
If good, in rosy characters of gold;
If bad, in letters of vindictive fire—
God may forgive, but cannot blot them out.

A Mr. Bidwell has discovered a water lily in a lagoon called Beppo, in New Holland, which has leaves eighteen inches in diameter. It grows in fifteen feet of water, and the flowers are eleven inches in their natural expansion.

A person passing through Alawick, and observing upon a door, "Haswell, Surgeon, &c." remarked, "that gentleman's name would be as well without the H."

For the School Journal.

Maple Sugar and the School Children.

MESSRS. EDITORS:—For the purpose of providing a pleasant and profitable exercise for the pupils of the common schools in this town, I requested them, on my first visit last summer, to ascertain and report to their respective teachers the number of pounds of maple sugar manufactured in their several districts last spring. They readily undertook the labor of collecting the information, and on my second visit, the teachers generally furnished me with the result, with the name and quantity made by each person.

Some such general exercise, in which all are interested, I am sure, must be of considerable value to the schools; and, on several accounts, it is desirable the result should be published.

Of the eleven districts, I have full returns from all except one, and the amount is 73,422 pounds, or nearly thirty-six and three-fourths tons! Has any town in the State exceeded this?

D. M. CAMP, Town Superintendent.

Derby, 23d October, 1849.

Teaching among the Athenians.

The Athenians were a wise and polished people, and they were the *only* people I have ever read or heard of, who understood the advantages of education. They set a right value upon it, and bestowed just rewards upon those who administered its duties. And this is the reason that we find such names as Aristotle, Socrates, Loginus, Plato and Plutarch, enrolled among their public instructors, and their Academy, Porico, and Lyceum, were among the noblest institutions of any age in any country. In that country, only men of the first talents were induced to become teachers, and they labored unremittingly to improve the mind of youth. Plato, after he was twenty years of age, attended the school of Socrates eight years; from the school of Socrates he went to that of Euclid; from thence he traveled into Magna Græcia, and was instructed in the Pythagorean mysteries. He also studied Mathematics with Theodorus of Cyrene, and having learned Astronomy from the Egyptian priests, he returned to Athens, opened a school, and spent his long life in the instruction of youth.—*He was qualified for a schoolmaster, and taught a school worth attending.*

It was only the encouragement held out to education by Athenians that enabled him to devote a whole life to imparting instruction. By encouragement, I mean not merely a pecuniary remuneration. His school was the common resort of the great and the noble throughout all Greece. Let the American Republic give the same encouragement to education that Greece did, and we shall Platos in this Western world.—*Selected.*

The Use of Trees.

2 Ask your neighbor why he has not more trees about his house, and he will tell you that they are of no great use, and besides, that it is very difficult to make them grow; that he has tried it once or twice, and

they have all died. Now these common reasons are both ill founded. It is of use for every man to surround himself with objects of interest, to cultivate a taste for the beautiful in all things, and especially in the works of nature. It is of use that every child should be educated, not only in the sciences and arts, and dead languages, but that his affections and *taste* should be refined; that the book of nature should be laid open to him; that he should learn her language in the flower and the leaf, written every where, in the valley and on the hill-side, and hear it in the song of birds, and the murmuring of the forest. If you would keep pure the heart of your child, and make his youth innocent and happy, surround him with objects of interest and beauty at home. If you would prevent a restless spirit, if you would save him from that lowest species of idolatry, "the love of money," and teach him to love what is lovely, adorn your dwellings, your places of worship, your school houses, your streets and public squares, with trees and hedges, and lawns and flowers, so that his heart may early and ever be impressed with the love of Him who made them all.

GENES FROM AFRICA. In some of the languages of Western and Southern Africa, we find occasional expressions which indicate a taste and capacity for poetry. Among the Mpongwes, for instance, the thunder is "the sky's gun;" the morning is "the day's child;" and one who has become intoxicated, is "taken captive by rum." When the Zulus wish to speak of the twilight, they will tell you of "the eyelashes of the Sun." "What conception can be more beautiful?" says Mr. Bryant, a Missionary in South Africa. "The gleams of morning light are but the eyelashes of that great orb, which is just ready to open on the world! Perfectly parallel is the well known Hebrew expression, 'eyelashes of the dawn.'" A Zulu will also say of a man who has defrauded him, "He has eaten me up." One of the highest compliments which he can pay, even to a white man, is to say, "You are black."

CHANGE OF COLOR IN FISH. The change of color in fish is very remarkable, and takes place with great rapidity. Put a live blackburn trout into a white basin of water, and it becomes within half an hour, of a light color. Keep the fish living in a white jar for some days, and it becomes absolutely white; but put it in a dark-colored or black vessel, and although, on first being placed there, the white-colored fish shows most conspicuously on the back ground, in a quarter of an hour it becomes as dark colored as the bottom of the jar, and consequently difficult to be seen. No doubt this facility of adapting its color to the bottom of the water in which it lives, is of the greatest service to the fish in protecting it from its numerous enemies. All anglers must have observed that in every stream the trout are very much of the same color as the gravel or sand on which they live. Whether this change of color is a voluntary or involuntary act on the part of the fish, I leave it for the scientific to determine.—*John on Sporting.*

THE AGRICULTURIST.

Bureau of Agriculture.

It is with real pleasure that we publish the following Report. We trust the liberal views and enlightened zeal of the Chairman of the Committee, who has signalized his appearance in the Senate by bringing forward this important measure, may meet a hearty response, not only at Montpelier (where we understand the project is received with great favor) but in other Legislatures and in Congress. We know that it will have many able and earnest advocates among all parties.

Circumstances are favorable to the realization of a wish that has been cherished by many, from the days of Washington to the present. A HOME DEPARTMENT has just been organized, and naturally suggests to all minds some connection with the eminently home interests of agriculture. We are in a state of peace and thrift, favorable to the rapid development of agricultural resources. Our means of rapid and unexpensive intercourse between different parts of the Union and with the wide world, are such as were never before the portion of any people. The vast multiplication of able agricultural journals, the zealous and successful investigations that are in progress into the science of agriculture, the increasing popularity of agricultural societies, &c., indicate a state of mind most favorable to and demanding some such general agency as the National Government alone can provide. Of all things, this country is rich in land, and in energetic practical talent. It is getting to be better understood every day, that our thrift is to be sought in the skilful application of the talent to the land, more than in anything else. To aid in this, we want, at the hands of Government, just that central agency which the proposed Bureau would furnish.

In no other way could so much be done to promote the general thrift and the national wealth, at so trifling an expense. Our army and navy and fortifications, make their demands upon the national purse by tens of millions. Our commerce is protected and encouraged at an immense expense. Agriculture asks but a mere trifle. The agents of the proposed Bureau are already provided—stationed in every state and county of the Union, and in every part of the civilized world. They ask no pay; they are ready to act; they require little more than facilities for communicating with each other, and with the great community of agriculturists as a body.

The labors of the Bureau would indeed be capable of indefinite extension; but a few thousands of dollars annually would go far, for its purposes. There is no ship to be built or fort to be constructed, at the cost of half a million; no thousands of men to be provided with rations, and pay, and transportation. And for some of its most expensive objects—for its scientific investigations, it may properly avail itself of the facilities afforded by the organization and plans of the SMITHSONIAN INSTITUTE. There is no scientific question bearing upon agriculture, which such a Bu-

reau might not properly propose to the Institute; and it would be in accordance with the plans of the Institute to be at the expense of making the investigations and publishing the results.

But we are making too long a Preface to Mr. Holbrook's able Report.—

REPORT

Of the Joint Committee raised to inquire into the Expediency of recommending the establishment of a BUREAU OF AGRICULTURE in the "Department of the Interior" at Washington.

To the Senate and House of Representatives:—

The Joint Committee, appointed to inquire into the expediency of a Legislative recommendation, on the part of this State, of the establishment, in the National Department of the Interior, of a Bureau of Agriculture for the promotion of the great interest of Agricultural Improvement in this Union, respectfully report:—

The founders of our government were desirous for the organization of a Home Department, devoted to the fostering and encouragement of Agriculture, and other Industrial Arts; but it seems that, for want of proper persons to organize and manage such a Department, it was laid aside.

At a later period, Washington recommended an organization, entitled "A Home Department of Agriculture." His conceptions upon this subject, like everything emanating from his practical, far-seeing mind, are exactly to the purpose, comprehending, more or less directly, about all that need be said in its favor. They are as follows:—

"It will not be doubted that, with reference either to individual or national welfare, agriculture is of primary importance. In proportion as nations advance in population, and other circumstances of maturity, this truth becomes more apparent, and renders the cultivation of the soil *more and more an object of public patronage*. Institutions for promoting it grow up, supported by the public purse, and to what object can it be dedicated with greater propriety? Among the means which have been employed to this end, none have been attended with greater success than the establishment of Boards, composed of proper characters, charged with collecting and diffusing information, and enabled by premiums and small pecuniary aid, to encourage and assist a spirit of discovery and improvement, by stimulating to exercise and experiment, and by drawing to a common centre, the results everywhere, of individual skill and observation, and by spreading them thence over the whole nation. Experience has accordingly shown that they are very cheap instruments of immense national benefits."

The methods of agriculture pursued by our fathers, in a new country, with a virgin soil and sparse population, were, perhaps, necessarily rude and improvident; but, with a rapid and unprecedented increase of population, improvements in tillage have not advanced with corresponding steps, or, generally speaking, been of long standing. By no more than a half century of bad cultivation, the soil of the older States has become either entirely run down, or greatly impoverished of fertility; and insects, blights, noxious

weeds, &c., the usual attendants of imperfect tillage, have increased and become accumulated to an alarming extent.

But the evil does not stop here. Too many of our intelligent, enterprising young men, observing the sad condition of the soil, and trained to false impressions, suppose that the agricultural profession, instead of being an open field for the efforts of Science to improve, is but an arena, fit only to be occupied by the illiterate and unenterprising, under the guidance of blind tradition. They accordingly press in masses into other callings, filling them to overflowing, and leaving the "Art of Arts" to its fate.

The same process of deterioration, which has been so nearly completed in the Atlantic States, is now going on at the West. Although nature, by a long and a most liberal process, has endowed the lands of that section with a fertility elsewhere unknown, still they can be impoverished by the hand of man.—The gradation to the same climax which has obtained in the older States may be slower, yet, in the nature of things, it must be sure. Many of the occupants of those now generous soils, under the same mistaken impression that they are inexhaustible, which possessed the first settlers of the more fertile tracts of the Eastern States, will probably live long enough to find that, under a constantly depleting and careless husbandry, what has been done can be done again. These remarks are of course subject to exceptions; but they are still quite too generally true.

While this rapid destruction of fertility has been going on among us, several of the States of Europe have been as rapidly advancing in productiveness.—There, Agriculture is fostered and encouraged by government; men of the first attainments, and in the highest walks of life, devote their time and talents to its improvement; the lights of several sciences, have been shed upon it; lands, under the cultivation of ages previous, have been so changed within sixty or seventy years past, by a judicious rotation of crops, and a system of manuring adapted to the soil and the crop, as to increase three-fold in productiveness; thousands of acres of wet lands, heretofore of little or no value, have been drained, and are now under profitable cultivation; agricultural schools and colleges have been established; and the breeding of agricultural animals has been carried to so high perfection in England and Scotland, that any other breeds, in the known world, may be improved by a cross with them.

It may be said that such high cultivation can not be profitable here. Neither can we afford to pursue our exhausting system of cultivation much further; for the decreased and decreasing crops will not remunerate our labor. If the state of things in our country will not warrant high farming, to the extent to which it is now carried in the countries spoken of, we certainly are warranted in the employment of far more enlightened and correct principles of tillage than are now common.

It has been well said, that 'a prosperous agricultural district is not without patriots to defend it;' and it is undoubtedly true, that a high state of intelligence

and scientific knowledge among our farmers, would conduce, more than any thing else, to the stability and perpetuity of our Republic, and to the rapid and full development of its vast agricultural capabilities. We may truly say, in this connection, that "every accession which Man gains to his knowledge, is also an accession to his power; and extends the limits of his empire over the world which he inhabits."

About three fourths of the population of our country are engaged in tilling the soil. Legislation to promote the prosperity of this interest, directly benefits the greater portion of the people; and indirectly, but not less surely, the remainder also. Now our legislators and others have not been wanting heretofore in eulogy upon the antiquity, dignity, importance and pleasures of Agriculture; but where has been that fostering care which would seek to encourage and promote it? Where have the farmers been, who would demand for the cultivation of the soil that conspicuous place to which it is so justly entitled?

But we are happy to observe that an improved sentiment is becoming prevalent. That "Agriculture is of primary importance;" that our nation has already "advanced in population and other circumstances of maturity," to that position which "renders the cultivation of the soil an object of public patronage;" that there is no "object to which it can be dedicated with greater propriety;"—these truths are gradually making their way into the minds of intelligent, thinking men.

We have, at length, a Home Department; and the question presents itself,—Can it, and will it, do any thing for Agriculture? It can, and we trust that it will. The politicians may seek to make it an instrument for the furtherance of party; and, with the bugbear of "constitutional objections," they may tell us that nothing can be done for Agriculture under this Department. But let the farmers, moving in a mass, call loudly for a Bureau of Agriculture, with proper and suitable patronage from the Government. Let it be managed by "proper characters," selected with reference to their fitness for, and devotion to, the promotion of Agriculture. They should be men above political contamination; and having a love for Science for its own sake; and keeping constantly in view the one great object which they were placed there to promote, they would not be induced to "give up to party what was meant for mankind."

A Board of Agriculture, thus "composed of proper characters, charged with collecting and diffusing information, and enabled by premiums and small pecuniary aid, to encourage and assist a spirit of discovery and improvement, by stimulating to enterprise and experiment, and by drawing to a common centre, the results every where, of individual skill and observation, and by spreading them thence over the whole nation," would soon be found to be "a very cheap instrument of immense national benefits."

1. This Board might be in correspondence with scientific men in all parts of our country, and with Boards of Agriculture in foreign countries,—thus drawing to a common centre, and from thence spreading broadcast over the land, all new facts and improve-

ments of utility, all valuable suggestions derived from the improvements and new lights of the various natural sciences which are intimately allied with Agriculture.

2. Proper premiums might perhaps be offered, to stimulate ingenuity, in the invention and production of the most valuable farm implements and machines; and by awarding to those which, upon proper test, were found best to answer a desired purpose, competition, and an ambition to excel, would be excited to the highest degree.

3. Persons in the employment of our Government, abroad, might be directed to collect and transmit to the Department, those new or improved seeds, fruits, plants, animals, implements, &c., which were deemed desirable. As it would be a part of the business of this Board, to institute extensive inquiries into the utility of introducing, for cultivation among us, the various valuable productions of other countries; and as the great range of latitude, of soil and climate, which our country embraces, undoubtedly admits of cultivating the products of almost every other country; we may reasonably suppose, that a proper effort in this direction alone, would be attended with very important results.

4. Premiums might be offered for the most able essays and the most satisfactory experiments to elucidate vexed questions and undeveloped principles in Agriculture,—if deemed proper and desirable.

5. Extensive inquiries might be instituted, into the habits of Insects troublesome to cultivation, and the best methods to exterminate them, or prevent their ravages. As the nation "advances in population, and other circumstances of maturity," it becomes more and more an object, pecuniarily, with our cultivators, to raise many sorts of fruits, and tender plants, comparatively unimportant at an earlier period. Now it is a fair estimate, that one-half the productions of man, of this description, go to feed the insect world. Indeed, of some kinds, in some seasons, they take the whole. Their depredations upon the various field crops are oftentimes extensive also. The subject of Entomology is vast and inexhaustible; it requires such extensive, and yet particularly minute, and often microscopic, investigations, that the efforts of ordinary associations of men can avail but little. But it is believed that a National Board of Agriculture would have resources, peculiar to itself, that might effect important results. Its inquiries might be very extensive, drawing in contributions from individuals and Societies, in every quarter, the sum total of which would be highly useful.

6. The various State and County Societies throughout the land, might be in correspondence with the Department,—thus receiving and imparting information upon these and other subjects.

In short, in a hundred ways, such an organization might forward the great interests of Agriculture.—Indeed, we may conclude, that no other establishment could parallel this, as a promoter of the interests, not exclusively of either section, but of the whole country.

The advocates of such a movement may, by some,

be called enthusiasts. They are so; for the magnitude and importance of the thing very properly awakens them to enthusiasm. It is right that our own State of Vermont should be a foremost, a zealous, pioneer in this business. Our people are an agricultural people; and they are awake to those measures which will foster and promote this commanding interest. Other States will join us in endeavoring to form an organization so desirable;—and thus the great sentiment of Washington, that "the power of the nation alone can carry out their high thought," will be realized.

In view of these considerations, your Committee recommend the adoption of the accompanying Resolutions.

F. HOLBROOK, H. E. ROYCE, J. W. D. PARKER,	} <i>Com. of Senate.</i>
C. K. WILLIAMS, JULIUS CONVERSE, H. E. HUBBELL,	
E. S. CARR, B. B. NEWTON,	

} *Committee of
House of Representatives.*

1. *Resolved*, That the General Assembly of Vermont earnestly recommend the establishment of a Bureau of Agriculture, in the "Department of the Interior" at Washington, whose province it shall be to superintend and promote the great interest of Agricultural Improvement in the nation.

2. *Resolved*, That the Governor is requested to transmit a copy of the foregoing Resolution, and of the accompanying Report, to the President of the United States, to the Secretary of the Department of the Interior, to the Governor of each State of the Union, and to each of our Senators and Representatives in Congress, to the end that the attention of Congress, and of the several State Legislatures, may be properly invited to the propositions embraced therein.

3. *Resolved*, That the Senators and Representatives of this State in the Congress of the United States, are hereby requested to use their influence to procure the necessary legislation, by Congress, for the speedy establishment, on a firm and permanent basis, of a Bureau of Agriculture, as suggested in the first foregoing resolution.

☞ Back numbers of this volume can still be supplied. To teachers, complete sets will be sent, at 75 cents for the three volumes, including the present.

It has been observed that on the old continent, birds pass in autumn to the south-west, and in the spring toward the north-east; the courses of rivers and chains of mountains have some considerable influence on the direction of their flight. On the American continent, the points of direction are not the same. The Greenland birds, it is said by Capt. Parry, migrate to the south-east.

CURIOUS PRODUCT. In St. Joseph's County, Indiana, there were manufactured last year 8,856 pounds of oil of peppermint; worth at the low rate of one dollar and fifty cents per pound, \$13,284!

William H. Ross, of Sussex county, Delaware, who has used over 40,000 bushels of ashes within the last five years, gives some of the results of his experiments in the American Farmer. In one instance, ashes were applied to an exhausted field, cleared more than sixty years, and never manured.—Squares of a half acre each were marked off for each experiment, the quality being alike. The following were the results, the ground being planted with corn :—

Two squares, unmanured with either, each, 10 bush.

The second year, about the same rate of difference continued. In this experiment, 50 bushels per acre were found about equal to 100 bushels. But in all other experiments, 100 bushels of ashes were found better than 50, and 200 better than 100, although so large a quantity was not found profitable. But with lime, little difference could be perceived between 50 and 100 bushels per acre. Ashes, on the contrary, invariably produced a decided benefit, whether on poor or rich land.

His farm, containing 400 acres of arable land, has doubled its products in five years, chiefly by the use of lime and ashes. But other manuring was found necessary.

The following experiment gave interesting results: A field of very poor land was manured, a part with mould from the woods, 100 loads per acre; a part with ashes, 100 bushels per acre; and a third portion with both. Where the ashes and mould were combined, the corn was more than twice as good as where the ashes were spread alone; the ashes alone gave corn 50 per cent. better than the undressed parts of the field; while the mould alone produced scarcely any sensible effect. A dressing of 100 loads of mould from the woods, 50 bushels of lime, and 100 of ashes, generally increased the corn crop more than 20 bushels per acre, and wheat in the same ratio; and so permanent are the effects of this mixture, that he believes its effects will be seen for twenty years.

The soil on which these experiments were made, was chiefly sandy loam, with some clayey portions; on the latter lime was found most beneficial. Similar experiments would doubtless give different results in other places, where the constituents of the soil vary in character and quantity.

Dr. UNDERHILL. Smut is a contagious disease, and often destroys crops. Steep the grain in brine that will bear an egg—brine from the beef or pork barrels will do. Steep at a moderate temperature for four or five hours—some steep it all night. Stir the seed thoroughly, and skim off all the dirt, poor seeds, foul seeds, &c., which rise to the surface. The seed will be well cleaned, as it should be.

Drain off the steeped seeds, spread them on your

barn floor, and rake in among them fresh slacked lime, until every grain has its lime coat on. Wood ashes will do for want of lime. The bulk of the seed is about doubled by the steeping. Now sow it on the field—first from North to South, next from East to West, and it will then be nearly even.

Dr. ANTISELL. Blue stone, the sulphate of copper, has been well employed in solution for steeping seed grain. When the solution bears an egg, steep in it from four to six hours. The first advantage gained, is softening the grain. 2d. The grain will now be protected from the small spores of fungi, which do much injury. 3d. It stimulates the growth better than salt, saltpeter, or anything else.

Mr. PIKE, of New Jersey, says that Campbell of Scotland steeps the grain twenty-four hours in a solution of sal ammoniac. That the wheat so steeped will tiller out ten to fifteen stems; while the same wheat unsteeped, will tiller out but six or eight. He dissolves but two pounds of sal ammoniac in a barrel of water.—*N. Y. Farmer's Club.*

A singular account of the ancient manner of breaking in horses, and redering them sure-footed when galloping over the most irregular and dangerous grounds, is related by Vegetius. The Parthian horses were lighter and hardier than those of the Cappadocians or Medes, and were the best war horses. A spot of dry, level ground was selected, on which various troughs or boxes, filled with chalk or clay were placed at irregular distances, and with much irregularity of surface and of height. Here the horses were taken for exercise, and they had many a fall as they galloped this strangely uneven course; but they gradually learned to lift their feet higher and to bend their knees better, and to step sometimes shorter and sometimes longer, as the ground required, until they could carry their riders with ease and safety over the most irregular places. Then it was that the Parthians could fully put into practice their favorite manoeuvre, and turn upon and destroy their unsuspecting foes. They were as formidable in flight as in attack, and would often turn on the back of the animal and pour on their pursuers a cloud of arrows, that at once changed the fortunes of the day.—*Scientific American*.

SOWING GRASS SEEDS. It seems now to be very generally conceded that the fall is a more suitable time to sow grass seed than the spring. If sowed before a rain or snow, it will be carried into the interstices of the soil by the action of the water, and covered sufficiently deep to ensure its germination, as soon as the atmosphere has acquired sufficient warmth in the spring. By passing a light harrow over the surface, and rolling it smooth after sowing the seed, every grain will germinate, and if the weather be favorable, the developments of the plants will proceed with astonishing rapidity until arrested by the frost. In this way there is little danger of failure. We know several farmers who never sow their grass seed in the spring, and have never known them to fail of a

good "catch," or to be troubled with poor seed. Try it!—*Maine Farmer.*

GRAPE VINES. We have an arbor about fifty feet long, on which is trained twelve Isabella grape vines. In the fall of 1848 we dug a trench along the inside of the arbor, the vines having originally been planted on the outside, and in this trench, three feet below the surface, placed cattle feet, procured from a slaughterhouse in the neighborhood, covered each foot with one pint of unleached wood ashes, and one quart of charcoal dust. This season the grapes are more plenty than we have ever seen them on any vine, and the flavor is very superior to any of the sort we have ever seen.—*Working Farmer.*

Economical Plans.

Poor folks need them; the rich ones should use them, that they may have the more to give away.

Let me tell of two or three. Perhaps they may be useful to some persons.

I sometimes want to see an article published in a newspaper months or years ago, and cannot afford time to look for it in an unarranged pile or string of papers. I therefore lay by my papers from week to week; and at the end of a year, I lay them down in the folio form and their proper order: place a piece of thick cloth, or pasteboard, or leather, about an inch wide, under them, and another above them, near the back side; and then, with an awl or small gimlet, make four or five holes through both pieces and the papers between them; and with a piece of pack thread passed through the holes, bind them together. The pieces of cloth, or other fit material, prevent the papers being so easily torn as they otherwise would be, and serve to make the book, if so we call it, more permanent. The volume thus made can be conveniently laid away; and by the help of the Index, I can conveniently refer to the articles in it whenever I have occasion to. It takes but little time to fix newspapers thus, and it saves much, when I want to refer to anything in them; and it may be they will be valuable 50 or 100 years hence.

To keep my monthly pamphlets I commonly just lay the twelve numbers for a year together in order, make three or four holes through them, tie the parcel together; and so have a bound volume. It is convenient enough for reference as often as I have need to use it; and I save enough, from the ordinary expense of binding two volumes, to educate, if not one of my own children, one of the heathen children in Ceylon or Madura. Otherwise he would remain in his dark heathen home; but I enable him to attend a Christian school through the whole year.

Sometimes I put a paper cover over them before making the holes, and then I can write the title on the back, and set the volumes on book shelves almost as conveniently as if they were bound, "*a la mode.*" I have not so many gold lettered backs of books to be proud of, as I otherwise might have; but I think I have more good writing done on the hearts of my fellow-immortals.

Once in a while I find an article in some newspaper

not belonging to the file I keep, which I may want to read again or quote. When I do, I cut it out, and put it in a scrapbook. To make this book I get some thin, but strong brown paper, which costs very little; fold it in the form I choose, and stitch it together about half an inch from the back. When I get articles enough laid in it, and find time, I arrange them according to subjects, so far as I can conveniently; and paste them into the scrap book. By means of the subjects, or of an index, which is made in a very little time, I can easily turn to any article in it whenever I please.—*Puritan Recorder.*

CORN FODDER AND PUMPKINS. J. H. Jenne, in the Boston Cultivator, says that two cows, in fine order, fed on corn fodder, and with each a large pumpkin a day, gave fourteen quarts of milk per day. When the corn fodder and pumpkins were gone, they were fed on good hay, when they fell off to seven quarts per day.

A SMALL ORCHARD. The American Agriculturist says:—"A gentleman within our knowledge has a small orchard on the Hudson river, of less than seven acres, which produces from \$500 to \$750 worth of apples annually. This is not one year of plenty, and another or two of famine, but is a regular, steady average yield. All this is secured by the simplest process, viz: good management."

IMPROVEMENT OF APPLES FROM THE CRAB APPLE. It has been stated by some writers, and generally believed, that our immense variety of apples all originated from the crab apple. A paragraph in the last American Farmer, quoted from the Alabama Planter, corroborates this statement as follows: "Our friend, James Magoffin, Esq., of St. Stevens, has for a series of years bestowed considerable attention upon the apple, and among the many fine sorts he now cultivates, has obtained, by successive plantings of the seed of the native crab apple, one of the best fall and winter apples in the Union."

PREMIUM POTATOES. Moses R. Moriarty, of West Hoboken, an enterprising farmer of New Jersey, has entered his field of potatoes for the first premium of the American Institute. The potatoes, we learn, are from seedlings of Mercers, of the second year's growth; are of superior quality, oval in shape, white with a dash of red at the ends; estimates the crop at more than 600 bushels to the acre. A committee from the Board of Agriculture will visit his farm in a few days.

BITTERS FOR BUGS. It is a little out of season now to doctor bugs, but as knowledge of a practical nature can be learned any time, and used when needed, we may as well state now that *Quassia* has been found an excellent thing to destroy the green lice, or the *aphis*, which we so often find on the young twigs of fruit trees, and also on other plants. We believe the community are indebted to Dr. E. G. Wygall, of Richmond, Illinois, for the facts in relation to this kind of remedy. He takes

one-half a pound of the chips of quassia, such as you find at the apothecaries, and boil them in six quarts of water. Immerse the twig which is infested with the lice, and they will "give up the ghost," it is said, in double quick time. It does not injure the plant at all, but it is death to the "bugs," and bitterly they rue the day that they taste it.—*Maine Farmer.*

Vermont Convention of Fruit-Growers.

According to notice given by the State Committee, a Convention of Fruit-Growers was held at Montpelier, October 18, and was organized by the election of Rev. Dr. WHEELER for President, and C. W. RICH, Secretary. The proceedings, including the organization of a State Horticultural Society, have been published in a pamphlet of eight pages. We have not room left for the whole.

A Fruit Committee was appointed, consisting of Mr. Goodrich of Burlington, Mr. Pinneo of Hanover, N. H., Dr. George of Calais, Mr. Curtis of St. Albans, and Mr. Smith of Tunbridge.

The Rules of the New York Society in regard to the naming and description of fruits, were adopted as the Rules of the Convention.

Mr. Goodrich, of the Fruit Committee, presented the "St. Lawrence" Apple, and stated that it originated in Montreal, and was probably a seedling from the Fameuse, which it strongly resembled—was much larger and fairer—ripened about two weeks earlier—and recommended it as worthy of general culture, and on his motion the recommendation was adopted.

Mr. Goodrich also presented the "Porter" Apple. The President stated that it was a native of Massachusetts—had proved hardy and productive in Vermont—that it was one of the most popular autumn apples in Boston. Mr. Pinneo, of New Hampshire, sustained the views of the President, and it was voted worthy of general culture.

The "Gravenstein" apple was presented by the President, from the garden of Prof. Torrey of Burlington—also by Mr. Goodrich. It was highly commended by Messrs. Field and Goodrich, and recommended for trial through the State. Adopted.

Mr. Paige of Stowe presented two seedling apples, which were referred to the Fruit Committee.

Mr. Baldwin presented five specimens of apples from Mr. Coleman of Lunenburg. Referred to Fruit Committee.

The President presented the "Pomme Grise" apple, a native of Montreal. He stated that it was an apple of the highest flavor, and hardy. Recommended for general culture.

Mr. Goodrich presented the "Hubbardston Non-such" apple, and gave a history of its origin and character. Mr. Field recommended it as hardy and of fine quality, and moved its recommendation for general culture, which was adopted.

Mr. Goodrich also presented the "Danvers Winter Sweet," a native of the town of that name in Massachusetts; also the "Ladies' Sweet," a native of Newburgh, N. Y. He stated that he considered

the Danvers Winter Sweet the best winter sweet apple yet introduced for general culture, and moved it be so recommended—adopted. He also stated that he considered the "Ladies' Sweet" to be the finest winter apple known, but thought it would not generally succeed in Vermont, but might be grown in all the warmer parts of the State, and moved its recommendation for trial. Adopted.

Mr. Goodrich, of the State Committee, stated that this was only a primary meeting, called without any concert of action, and that the result of the call had excited the most sanguine expectations of its friends; that to carry out the objects of the Convention, it was necessary to have a State organization. To effect this, and to learn the opinion of all gentlemen present, he would present the following resolution:

Resolved, That it is expedient at this time to organize a State Horticultural Society, and that the business committee be directed to report a Constitution and list of Officers to an adjourned meeting of this Convention, this evening. Adopted unanimously. Adjourned, to meet at 7 o'clock.

Want of time prevented many varieties of apples being presented for a general expression of opinion of their qualities. During the time the committees were engaged in making reports, gentlemen from various parts of the State were engaged in comparing apples from different places, exchanging opinions of their culture, &c.

More than 200 varieties of apples were presented, besides 10 or 15 varieties of pears, with some grapes and plums; but as no lists were handed the Secretary by the contributors, he is unable to give a detailed statement of them.

Among the principal contributors was the President, who exhibited a large collection of apples and pears, from his own and from Prof. Torrey's garden, in Burlington.

Mr. Goodrich exhibited specimens of about 50 varieties of apples and pears, with the Blue Imperatrice Plum. Mr. Smith of Tunbridge exhibited a large collection of apples. Mr. Miller of Pomfret sent for exhibition about 20 varieties, with descriptions, all labelled. Mr. Hatch of Strafford, and Dr. George of Calais exhibited some fine specimens of apples, and there were numerous small collections from most counties in the State—showing that, with proper attention, apples may be grown in all parts of Vermont.

Some fine Grapes, said to be a seedling from the Isabella, from Williamstown, were presented.

The Convention were highly gratified with a very fine show of Apples by Mr. Joseph Pinneo, Nurseryman of Hanover, N. H., consisting of about two bushels in quantity, and about 40 varieties of approved sorts. The Convention, judging him "by his Fruits," recommend him to the favorable notice of all wishing fruit trees.

SEVEN O'CLOCK.

The President and Secretary being absent to attend previous engagements, Mr. CURTIS, of Franklin County, was chosen President, and Mr. Goodrich, Secretary.

The Committee on Fruits submitted the following report to the Convention.

"From the short time allowed for our examination, and from the impracticability of judging any new variety of fruit when unripe, our report must necessarily be very imperfect. The specimens of apples, generally, were fully equal to any exhibited at Shows of our sister States, and where all are good—and, as this was a Convention for comparison and not for show, any remarks seem to be unnecessary.

Among apples presented was one incorrectly called the "*Muskmelon Apple*," and was highly recommended by Mr. Miller of Pomfret. This was the "*Bough*" Apple, an old and well-known variety, and the finest early sweet apple cultivated, and recommended for general cultivation.

Two Seedlings from Barre, both unworthy of culture. Two Seedlings from Mr. Coleman of Lunenburg; one oblong green; sub-acid, recommended for trial in all the colder parts of the State,—the other worthless. A Seedling from Mr. Smith of Tunbridge, large, oblong, green, with a slight blush, sub-acid, recommended for trial.

Two Seedlings from Mr. Paine of Stowe; one a beautiful, medium size, round, sweet apple, color a bright red—a winter fruit—recommended for general culture through the State; the other a green, acid apple, good size, but unworthy of culture.

Your Committee, not having an opportunity or time to make the inquiries and comparisons necessary for recommending a list of Fruits for cultivation in Vermont, must decline doing it at this time, but hope to be able to report next season."

Mr. Field, from the Business Committee, reported the following Constitution for a State Horticultural Society:

CONSTITUTION OF THE VERMONT HORTICULTURAL SOCIETY.

ART. 1. This Society shall be called the VERMONT HORTICULTURAL SOCIETY.

ART. 2. The Officers shall consist of a President and four Vice Presidents, who shall be Ex-Officio members of the Executive Committee, a Secretary, a Treasurer, an Executive Committee of five, and a Corresponding Secretary for each county in the State—who shall hold their offices for one year, and until others be elected.

ART. 3. Any citizen of Vermont may become a member of this Society by paying one dollar annually—or a Life Member by paying ten dollars at one time. Corresponding members may be elected by the Executive Committee, or by a vote of the Society at any regular meeting.

ART. 4. The Executive Committee shall make and publish a Code of By-Laws, and have the general management of the business of the Society.

ART. 5. This Constitution may be altered or amended by a vote of a majority of the members present at any annual meeting of the Society.

On motion of Dr. George, this Constitution was unanimously adopted.

Mr. Field, from the same Committee presented the

following names for Officers of the Vermont Horticultural Society, and they were elected:

President, CHAUNCEY GODDRICK, Burlington.

Vice Presidents, 1st. E. C. Tracy, Windsor; 2d. Daniel Baldwin, Montpelier; 3d. Jasper Curtis, St. Albans; 4th. Frederick Holbrook, Brattleboro.

Secretary, S. B. Colby, Montpelier.

Treasurer, Geo. W. Scott, Montpelier.

Executive Committee, David Read, Winoski; Albert Chapman, Middlebury; B. F. Faye, Bennington; Royal Hatch, Strafford; Wm. C. Kittredge, Fairhaven.

Corresponding Secretaries, C. K. Field, Newfane; H. Canfield, Arlington; Geo. B. Green, Windsor; E. S. Carr, Castleton; Solomon Jewett, Weybridge; P. Perrin, Randolph; J. P. Fairbanks, St. Johnsbury; Chas. Bowen, Montpelier; Rev. Prof. Torrey, Burlington; Rev. B. B. Newton, St. Albans; Rev. S. R. Hall, Craftsbury; J. M. Sowles, Alburgh; Wm. Heywood, Jr., Guildhall; A. Huntton, Hydepark.

The Markets.

BRIGHTON MARKET, October 25, 1849.

At Market—1200 Beef Cattle, 1650 Stores, 4900 Sheep and 1825 Swine.

Prices—Beef Cattle—Last week's prices were well sustained, viz: extra \$6; first quality \$5 25 a \$5 50; second 4 75 a \$5; third, \$4 at 4 50.

Stores—Two years old \$9 a \$15; three years old \$15 a \$25.

Working Oxen—Sales at \$60, 73, 82, 85, 90, and 105.

Cows and Calves—Sales at \$10, 23, 25, 32, 35, and 37.

Sheep—Lots at \$1 42, 1 62, 1 88, 2 25 and 2 50.

Swine—Lots to peddle, 3½¢ for Sows, 4½¢ for Barrows; fat Hogs 4½¢. At retail from 4 to 5½¢.

WOOL. BOSTON, October 11. American Fleeces in good demand at quotations.

Prime Saxony Fleeces, wash'd lb.	42	a	45
American full blood	38	a	40
do 3-4	35	a	37
do 1-2	31	a	33
do 1-4 and com.	28	a	30
Extra North's pulled lamb	36	a	38
Super do do do	31	a	33
No. 1, do do do	28	a	30
No. 2, do do do	21	a	23
No. 3, do do do	15	a	16
Smyrnia washed	16	a	20
do unwashed	8	a	41
Bengali unwashed	7	a	9
Buenos Ayres	8	a	20

—Courier.

FANEUIL HALL MARKET.

WHOLESALE.		SEED—RETAIL.	
Beef, fresh, lb.	a 12½	Eggs, doz.	00 a 19
Mutton, 1st qual. 6a	16	Apples, barrel,	2 50 a 3 50
2d " 4a	6	Beans, bush,	1 50 a 1 75
Lamb, lb.	3 a 10	Peas, bushel,	0 00 a 0 00
Veal, lb.,	3 a 9	Potatoes, barrel,	2 00 a 2 50
Pigs, roasting, 100 a 1 25		Onions, bush,	75 a 0 00
Chickens, pair,	75 a 1 00	Honey in comb,	10 a 20
Turkeys, spiced, 100 a 1 20		SEED—RETAIL.	
Geese, mongrel, 1 25 a 1 50		Clover, Northlb.	12½ a 00
Pigeons, dozen, 1 00 a 1 25		Southern,	8 a 9
Pork, per 100lb. 5 50 a 6 25		White Dutch,	20 a 25
Lard, best, pr. 6lb 7 00 a 7 50		Lucerne, or French,	33
Western, keg, 7 50 a 8 00		Herdsgrass, bush,	3 50 a 0 00
Butter, lump, lb. 22 a 25		Red Top, bushel,	
do. skrin, 12 a 18		Northern,	1 25 a 0 00
Cheese, new milk, 6 a 7		Southern,	00 a 87½
do. four milk, 5 a 6		Orchard Grass,	— a 2 00
		Fowl Meadow,	2 50 a 0 00

GUTTA PERCHA SOLUTIONS. Gutta Percha readily dissolves in a solution of chloroform without the aid of heat. The solution thus formed, makes a capital varnish; for if it is brushed on any object, the chloroform evaporates with great rapidity and leaves a thin skin of the gutta percha, which thus acts as a preservative against the influence of water and air. It is therefore excellent as a plaster for cuts. This solution is excellent to preserve fruit in a collection of natural history. Heretofore wax has been used for this purpose, but it is not so good as this, for this solution prevents the fruit from drying. This solution is the best and most delicate varnish for paintings and drawings on paper.

A CONSTANT SUPPLY OF EGGS. A neighbor of our State says that hog's lard is the best thing he can find to mix with the dough he gives to his hens. He says that one cut of this fat as large as a walnut will set a hen to laying immediately after she has been broken up from setting, and that by feeding them with the fat occasionally, his hens continue to lay through the whole winter.—*South Carolinian*.

UTILITY OF NETTLES. It is a singular fact, that steel dipped in the juice of the nettle becomes flexible. Dr. Thornton, who has made the medical properties of our wild plants his peculiar study, states that lint dipped in nettle juice, and put to the nostril has been known to stay the bleeding of the nose, when all other remedies have failed—and adds, that fourteen or fifteen of the seeds ground into powder, and taken daily, will cure the swelling in the neck, known by the name of goitre, without in any way injuring the general habit.—*Medical Times*.

TALL CORN. Augustus Porter, Esq., of Lyons precinct, in this county, has sent to our office a specimen of corn, raised on his farm, consisting of three stalks grown on one hill. The stalks are 14 feet in height, and the ears 10 feet from the root of the stalk. The whole averaged from seventy-five to one hundred bushels to the acre.—*Chicago Democrat*.

Domestic Economy.

A BACKWOODS POT-PIE. Put large portion of yellow Indian meal, (with a very little salt,) into a deep pan, and pour on scalding water, (stirring it in as you proceed,) till you have a soft dough. Beat and stir it long and hard, adding more corn meal, till the dough becomes stiff. It will be improved by mixing it in a little wheat flour. When it is cool enough to handle, knead it a while with your hands. Take off portions of the dough or paste, and form them into flat square cakes. Take a large pot, grease the bottom and sides with a little good dripping or lard, and line them with the cakes of corn meal.—Have already some fresh venison cut into pieces, and seasoned with a little salt and pepper. Put some of it into the pot, (adding a very little water to assist in the gravy,) and cover it with a layer of corn cakes.

Then more venison, and then more cakes, till the pot is two-thirds full. The last layer must be a large cake, made to fit closely over the whole. Fill up the pot with water. Set it over the fire, and let it boil steady till the whole is thoroughly done. Then take it up and dish it together, meat and paste.

The paste that is to line the sides and bottom of the pot should be thinner than that which is to be laid among the meat.

If you have any cold drippings of roast venison you may mix some of it with the corn meal as shortening.

Sweet potatoes sliced, and laid among the meat, will improve this pie.—*From Miss Leslie's "Indian Meal Book."*

TO EXTRACT INK FROM FLOORS. Ink spots on floors can be removed by scouring them with sand wet in oil of vitriol, and water, mixed. Rinse them, when the ink is extracted, with strong pearl-ash water.

TO REMOVE PAINT AND PUTTY FROM WINDOW GLASS. Put sufficient pearl-ash into hot water to make it very strong of it; then saturate the paint which is daubed on the glass with it. Let it remain till nearly dry, then rub it off hard with a woolen cloth. Pearl-ash water is also good to remove putty before it is dried on the glass. If it dries up, whiting is good to remove it.—*American Housewife*.

HOW TO MAKE A GOOD CUP OF TEA. We dare say nine-tenths of our lady readers will turn up their pretty noses at the idea that a man should undertake to teach them how to make a good cup of tea! Nevertheless, M. Soyer has actually undertaken this venturesome task. He says that, before pouring in any water, the teapot, with the tea in it, should be placed in the oven, or elsewhere, till hot, and the pot then filled with boiling water. In this way, he says, a most delicious cup of tea will be produced, much superior to that drawn in the ordinary way.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,
and sent to subscribers on the following

TERMS:

For a single copy,	- - - - -	50 cents.
5 copies, sent to one address,	- - - - -	2 00
10 " " " " "	- - - - -	3 00
16 " " " " "	- - - - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

IF Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

SCHOOL JOURNAL

AND VERMONT AGRICULTURIST.

Vol. III.

WINDSOR, VT., DECEMBER 1849.

No. 8.

THE SCHOOL JOURNAL.

The New School Law.

It is with real pleasure that we lay before our readers the new Law in relation to Common Schools.—We are sorry to part with the services of some of our excellent County Superintendents; but their office has been so poorly paid that we could hardly ask them longer to make the sacrifice which they have done in performing its duties. And there will now, also, be opportunity for them, at the Teachers' Institutes and as Town Superintendents, to do no little good, without so much sacrifice of time.

Our popular State Superintendent again takes the office, and under the new arrangement will be able to carry out the plans he has meditated, and exert an influence new to Vermont in the promotion of the cause. The services of such a man, devoting his whole energies to the business, are what, more than any thing else, our school system has wanted for the last three years.

And the provision for Teachers' Institutes is admirable. There is now all the opportunity that could be wished, to make their influence felt in every district. We trust that the friends of education will all coöperate to give them their greatest possible efficiency. Not that, of themselves, they will furnish such teachers as we need,—far from it. An Institute that sends teachers away with the impression that their education for their work is finished, is to be deprecated. A main object of a Teachers' Institute is to show teachers how much more they need to study.—To impress this upon their minds, to give them impulse and direction in the way of improvement, to furnish hints and aids for the teacher to work upon for himself in regard to methods of government and instruction, is about all that can be expected from an Institute. Of course the great business of study is left to be pursued in private or at the Academies. The result ought therefore to be, an increase in the number of scholars at the Academies; and with this end in view, it is the wise part for the Academies to look upon the Institutes as a part of the system, and to do what they can to make them powerful agencies for their legitimate purpose.

As is the Teacher, so is the School. Such is the maxim on which the efforts of those who have most experience in such public movements are based.—

There is now provision made for such efforts for the improvement of Teachers as Vermont has not yet witnessed. The law takes effect from the first of March next; and the three intervening months will enable the friends of the cause to mature their plans, and make all necessary preparations for doing the work before them well and thoroughly.

An Act in amendment of an Act relating to Common Schools, approved November 5, 1845.

It is hereby enacted by the General Assembly of the State of Vermont as follows:

SEC. 1. All sections and parts of sections of "an act relating to common schools," approved November 5, 1845, which relate to the appointment, duties and compensation of county superintendents of common schools, are hereby repealed.

SEC. 2. The state superintendent shall be required to devote his time and energies to the great work of improving the common schools of the state; and in addition to the duties assigned to him by the seventh section of an act relating to common schools, approved November 5, 1845, he shall visit and lecture in the several counties of the state; shall attend, as far as is practicable, the teachers' institutes, hereinafter provided for, and deliver, or cause to be delivered, before said institutes, a lecture on some subject connected with common schools, and seek, by all the means in his power, to awaken a broader and deeper interest in the subject of popular education.

SEC. 3. There shall be holden, in different parts of the state, teachers' institutes, under the direction of the state superintendent, at such times and places, and under the care of such instructors, as he shall appoint, for the purpose of improving teachers and fitting them for their high and responsible duties; and a sum, not exceeding one hundred dollars for each institute so holden, is hereby appropriated from the state treasury, to be paid by the treasurer upon the order of the state superintendent; but the number of institutes in any one year shall not exceed twelve.

SEC. 4. The state superintendent shall be entitled to receive from the treasury of the state the sum of eight hundred dollars annually, payable quarterly, which shall be in full for his services as superintendent. All moneys expended by him for postages on letters connected with the duties of his office, and for the printing of his annual report, which shall be done before the meeting of the Legislature, and be

ready for distribution at the opening of each annual session thereof, and all moneys paid for the printing of forms and instructions, and transmitting the same to the town superintendents, shall be allowed him by the auditor of accounts, and paid out of the treasury of the state.

SEC. 5. The town superintendents of the several towns in each county shall constitute a board to examine and recommend suitable books to be used in the schools of their respective counties. And it shall be the duty of the town superintendents to make a detailed report of the condition of the schools, at the annual March meeting of their respective towns.

SEC. 6. It shall be the duty of the town clerk of each town, annually, in the month of April, to forward to the state superintendent of common schools, by mail or otherwise, the abstract of the returns of district clerks which he is required to prepare in accordance with the provisions of section six of an act relating to common schools, approved November 15, 1847.

SEC. 7. All acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

SEC. 8. This act shall take effect from and after the first day of March next.

Approved, November 12th, 1849.

For the School Journal.

To the Children who read the School Journal. BE COURTEOUS.

CHILDREN:—I want to say a few things to you, and I know of no other way in which I can speak to so many of you at once, so I write what I have to say and send it to the School Journal, for you to read. I should like to say many things to you in regard to your studies for I am anxious, in common with a great many others, that you should increase in knowledge. But I wish now more particularly to speak of your manners. You have heard a good deal said on this subject by your parents and teachers, but it may be you have thought after all it was not a matter of very great importance. But it is. Did you know, or ever think, that it is a duty to be polite? That every one ought to be so? That the Bible teaches us to be so? That the great God that made us, requires it of us? It is so. Look in your Testaments, at 1 Peter, 3d chapter, and the last part of the 8th verse; it says—“*Be COURTEOUS.*” And that is the same as—be polite.

But what is it to be polite? perhaps you ask. I will tell you. It does not mean that you must have a fine coat, or kid shoes, or a genteel hat. You may be polite without fine clothes; though I think true politeness will lead you to have some regard to your appearance; not to be anxious to have rich clothes, but to keep the clothes you wear, whether coarse or fine, clean and in order. But true politeness has respect, not so much to the clothes, as to the feelings, and words, and actions. A man in a coarse frock may be polite; or a boy in sheep's-grey, and thick shoes, or even barefoot, if he have no shoes; or a girl in a homespun frock, and stockings she knit herself. But I don't think an unkind, crabbed boy—or a petulant, pouting girl, can very well be polite. To

be polite, or courteous, you must have pleasant, kind feelings, and use kind and pleasant words. Try hard to please your Teacher, and Parents, and Playmates, and you will be almost sure to be courteous.

When I am passing about among people, or riding in the stage or the cars, I do like a great deal better to meet with a courteous man, than a sour, harsh and crabbed one. He makes people about him feel more comfortable; he wins their hearts; they like to be in his company. If they have any thing to ask him, they feel sure of a kind answer. I would almost as soon have a bear for a companion, as an impolite, uncivil man; I would rather go in solitude the whole day.

But incivility appears, in some respects, worse in a boy than in a man. If it be desirable that a grown up man be courteous, certainly it is important that children be so; for a crabbed boy will be likely to grow into a crabbed man. And that is something that nobody loves. It is a deformity in nature that we look upon with pain. It is certainly a very desirable thing to be loved, and thought well of, by the good. If you have kind feelings, and kindly express them, you will be sure of friends.

Lord Chesterfield wrote a great many things about manners, and gave rules to be observed in order to be polite; but here is one worth the whole of them,—and you can easily remember it; and if you follow it, you will hardly fail to obey the precept—be courteous. It is this,—*Always speak PLEASANTLY and RESPECTFULLY.*

Not long ago, I sat at the table with some very good people who had two children, a little girl and a little boy. The girl was about seven or eight years of age. I will not call her name, for I do not wish to expose her. When she wished to be helped to any thing, she said, in a cross way, “I want some o' this;” “Give me that.” And if asked a question, the answer was with a blunt “Yes;” or “No.”—And when her mother kindly helped her to something, she said, “I wont have that;” “You know I don't like it fixed so.” And then at play with her little brother, she would say, “I will, too;” and “You shan't;” and “You shall;” and “I don't like you,” and such like words. Now tell me, children, was that being courteous? If that little girl sees this, and sees how those words look in print, and how they sound when repeated, it seems to me she will never use them again. How can one love children who use such unkind and disrespectful words! It takes but little longer to say, “No, sir,” and “No, ma'am;” and “I'll thank you for that;” or “Please give me this;” and when any thing you wish is offered, say, “I thank you.” And who will not think better of the child who does this? And then remember the Bible says, *Be courteous.*

A learned man from England said, “Every man,” among us “over twenty-one years of age claims to be a sovereign; he is therefore bound to be a gentleman.” And so he is; bound, not only by his connection with the government, and by the claims of society, but by the Bible, to be a gentleman. So children, every time you speak a disrespectful, or un-

kind word, you make it more and more unlikely that you will ever grow up into gentlemen. Begin now, and at home, and at school, with your parents, and teachers, and playmates, and every where and always practice upon this precept—"Be courteous."

R. C.

Manner of Recitation.

Promptness and dispatch are characteristics of our times, and young men must be educated in reference to them. There is no place, perhaps, better calculated to train a scholar to think and act with precision and energy, than at the blackboard. When a scholar is called out from his class to solve a question, let him quickly, and with gentlemanly mien endeavoring to be self-possessed, take his stand at the board, read his question distinctly, and with the same reference to rhetorical notation as though he were called out on purpose for the reading of the question. Then let him state his question, giving the reasons for each step as he proceeds; or let him state and solve his question, then return to the commencement, and illustrate the principle, and give the reason for each step in the solution. Then let him pause at the board a moment, for his teacher to propose such questions as he may think proper.—*Burnham's Arithmetic.*

Thoroughness—the Teacher's Duty.

What are the duties of the school teacher? I have not time to enumerate or define them. I cannot mention even the names in the long catalogue; but I will call your attention to one which comes very near to embracing them all. By this one I mean *thoroughness* in every thing you teach. *Thoroughness*, *thoroughness*, and again I say *thoroughness*, is the secret of success. You heard some admirable remarks this morning, from a gentleman from Massachusetts, [Mr. Sears,] in which he told us that a child, in learning a single lesson, might get not only an idea of the subject matter of that lesson, but an idea how all lessons should be learned; a general idea, not only how that subject should be studied, but how all subjects should be studied. A child, in compassing the simplest subject may get an idea of perfectness, which is the type and archetype of all excellence, and this idea may modify the action of his mind through his whole course of life. Be thorough, therefore, be complete in every thing you do. Leave no enemy in ambush behind you as you march on, to rise up in the rear and assail you. Leave no unbroken link in the chain you are daily forging. Perfect your work, so that when it is subjected to the trials and experiences of life, it will not be found wanting.

It was within the past year that I saw an account in the public papers, of a terrible gale in one of the harbors of the Chinese seas. It was one of those *typhoons*, as they are called, which lay prostrate not only the productions of nature, but the structures of men. In the harbor were lying at anchor the vessels of all nations, and among them the United States sloop-of-war Plymouth. Every vessel broke its cable,—but one. The tornado tossed them about, and

dashed them against each other, and broke them like egg-shells. But, midst this terrific scene of destruction, our government vessel held fast to its moorings, and escaped unharmed. Who made the links of that cable, that the strength of the tempest could not rend? Yes! Who made the links of that cable, that the tempest could not rend? Who was the workman that worked under oath, and whose work saved property and human life from ruin otherwise inevitable? Could that workman have beheld the spectacle, and heard the raging of the elements, and seen the other vessels as they were dashed to pieces and scattered abroad, while the violence of the tempest wreaked itself upon his own work in vain, would he not have had the amplest and purest reward for the fidelity of his labors?

So, in the after periods of your existence, whether it be in this world, or in another, from which you may be permitted to look back, you may see the consequences of your instruction upon the children you have trained. In the crisis of business life, where intellectual accuracy leads to immense good, and intellectual mistakes to immense loss, you may see your pupils distinguished between error and truth, between false reasoning and sound reasoning; leading all who rely upon them to correct results, establishing the highest reputation for themselves, as well as for you, and conferring incalculable good upon the community.

So, if you have been wise and successful in your moral training, you will have prepared them to stand unshaken and unseduced amidst temptations; firm where others are swept away; uncorrupt where others are depraved; unconsumed where others are blasted and perish. You may be able to say, that by the blessing of God you have helped to do this thing.—And will not such a day be a day of more exalted and sublime joy, than if you could have looked upon the storm in the eastern seas, and known that it was your handiwork that saved the vessel unharmed amid the wrecks that floated around it? Would not such a sight be a reward great and grand enough to satisfy and fill any heart, mortal or immortal!—*Hon. Horace Mann.*

LYME, N. H., Nov. 9th, '49.

In the School Journal for October, it is stated that "books can be obtained through the mail at a trifling expense for postage."

It should have been "unbound books;" for a work sent for to Boston, came through the Post Office in this place to day with the cover torn off and "pamphlet" written on the wrapper.

A TEACHER.

A SPIRIT OF INQUIRY. Mr. Locke was asked how he had contrived to accumulate a mine of knowledge so rich, yet so extensive and deep. He replied, that he attributed what little he knew, to not having been ashamed to ask for information; and to the rule he had laid down, of conversing with all descriptions of men, on those topics chiefly that formed their own peculiar professions or pursuits.

Teachers' Association.

The second Semi-annual Meeting of the Teachers Association for the Southern District of Windsor County, was holden in the Congregational Church, in Chester South Village, on Saturday, Oct. 20th, A. D. 1849.

The meeting was quite well attended, and those present evinced a deep feeling in the educational interests of our State and country, and especially in the qualifications of Teachers.

After the proceedings of the previous meeting were read, the Association voted so to amend their constitution that the annual meetings shall be holden on the first Saturday in May, and the semi-annual on the third Saturday in October.

Invited all present to partake in the deliberations of the meeting.

The following resolution was presented for discussion; viz. :—

Resolved, That corporal punishment as a means for securing obedience and good order in common schools should not be abolished.

Discussed by P. Sheldon, A. M., Rev. Mr. Stone, Rev. Mr. Taylor, Rev. Mr. Sawyer, and C. B. Smith, A. M., in a manner which most clearly proved that there is a great lack of government in our common schools; and the necessity of returning to the good old puritanic principles, was strongly urged upon teachers.

Voted to lay the resolution upon the table until afternoon.

Adjourned to meet at one o'clock.

AFTERNOON.

The discussion of the forenoon was resumed with much interest, by A. D. Hagar, Esq., Rev. Mr. Taylor, C. B. Smith, A. M., and Rev. Mr. Stone.

Adopted the resolution unanimously.

Rev. Mr. Dudley, County Superintendent, delivered a very elaborate and interesting address upon the importance of common schools, clearly showing the necessity of immediate and efficient action by the friends of popular education, and the many and valuable advantages to be derived from properly organized "Teachers' Institutes," and Normal Schools.

The Association voted thanks to Rev. Mr. Dudley for his very instructive and eloquent address.

The Common School Writing Book, a progressive series, in five numbers, by O. G. Badlam, was presented to the association, with a desire that it might be examined by teachers.

The following resolution, viz. That by the formation of Teachers' Associations in each town much may be done for the cause of education in awakening an interest on the part of parents, and increased exertions on the part of teachers; after discussion by Rev. Mr. Taylor and S. H. Leonard, Esq., was adopted.

The following resolution, presented by Mr. Maynard of Ludlow, was unanimously adopted, viz. :

Resolved. That our thanks are due to the citizens of Chester for their kindness and hospitality.

Voted that the proceedings of the Association be

sent to one or more papers published in the vicinity, for publication.

Adjourned. C. B. SMITH, *President*.

S. H. LEONARD, *Secretary*.

From the Report of the Edinburgh School.

Incidents of School Government.

Proofs of the success of the System, in its fundamental principle, of governing by Love, and not by Fear, and that consistently with the most perfect order and discipline.

1. The master one day intimated that he wanted a number of articles, of a kind which he enumerated, to illustrate the lessons. He was next day inundated with all sorts of odds and ends, every child bringing with him something—leather, feathers, cloths, silk, stones, wood, glass, etc., etc.

2. Accidentally saying that he would come and visit his pupils at their own homes, and if he did, how they would entertain him, the question was answered by a burst of hospitality, and the number and variety of the articles of cheer enumerated were too much for his gravity. He observed, however, that *whisky* was not among the temptations offered him, in the competition for the preference of his company.

3. A parent came one day to the school, expressly to be satisfied on the puzzle, as he said it was to him, how a *schoolmaster* could render himself the object of love! His own was always the object of terror; and, instead of running to him when he appeared, he and his schoolmates went off in the opposite direction with the greatest alertness. His boy, he said, runs to the master whenever he sees him, and is proud to come home and tell that he has shaken hands with Mr. Wright, of whom, as well as of Mrs. Wright, and Maggy (the latter a worthy of three years old, the master's child, who sets an example to the whole school), he never ceases to speak.

Mr. Wright requested the inquirer to remain, and see the fun that never flags, while he saw discipline and obedience at the same time. The children went to the playground, and to the amazement of the visitor, the teacher ran out, crying, "Hare and hounds! hare and hounds!" taking the first character on himself. He was instantly pursued full cry by the whole pack round and round the playground; at last he was taken, and worried by an immense act of coöperation. In his extremity he rung his handbell for school; instantly the hounds quitted their prey, rushed into school, the door being scarcely wide enough for them, and were within a minute as still as a rank of soldiers, seated in their gallery, and busy with the multiplication table. The visitor went away with a shrug, muttering, "Na, the like o' that I ne'er saw!"

Many pages might be filled with anecdotes illustrative of the beneficial effects of the system in preventing the numerous fears, follies, envyings, discontents, and prejudices, which render the lower classes so intractable. The superstitious fear of ghosts, witches, etc., is practically removed. A person informed Mr. Wright, that as he was crossing a churchyard, not without the habitual dread which from his youth he could not separate from the place, he met a little girl of five years old marching through all alone. He

asked her, "Was she not afraid?" "Not a bit; we learn at the Infant School that ghosts and all that is nonsense." All dirty, gross, destructive, selfish, and insolent habits are proscribed, and carefully prevented; and, above all, *whiskey* is held up as the greatest of curses to society, and many a lesson is taught of its effects on both mind and body. The children heard with much indignation, of a crowd in the street insulting a poor Turk, of some boys who teased a poor idiot, of the mob breaking windows on occasion of the illumination, and of the people maltreating the doctors for their kindness in trying to cure the cholera.

N. B. It is unnecessary to give examples of the effect of intellectual practice, as there is less novelty in children being trained to acuteness and sagacity; and much of this is capable of exhibition to the public, which is not possible on set occasions, with proofs of moral advancement. The results in this department, it may, however, be mentioned, are most satisfactory.

The Mother's Part.

Mothers should regulate the time of their children, so that one thing may not interfere with another. Every thing should have a time, and every thing should be attended to in its time. Children must play; but at the same time, they should be taught that play is not the principal thing. They should have set times for play, as well as for other things. If this was strictly adhered to for a time, children would become habituated to it. But when such regulations are made to-day, and overlooked to-morrow, children learn to disregard them, and bad instead of good results are produced. Every law has a penalty connected with it, and there is nothing better calculated to bring the law and the legislator into contempt, than to omit the infliction of its penalty upon the transgressor. Let those mothers who are always making laws with severe penalties attached thereto, remember this.

Mothers should early commence to teach their children industry. There are many little things which they could do which would awaken a disposition to be useful. Children are naturally industrious. Put them in a room, says a late writer, and they will soon produce confusion among the furniture. In this way the natural disposition is exhibited. This disposition needs training, so that it may be exercised to some good purpose. We all know that children must be engaged in some way, and it should be the aim of mothers to employ them in something useful. In the nursery, they may be taught to go on errands from one part of the room to another. This kind of exercise paves the way for more extended service. It is amusing to see the importance which little ones attach to a trifling job of this kind. They attach as much consequence to a little errand to the store as a western merchant does to his trip to New York.—Such attention learns children to be useful, and by degrees they acquire that knowledge of business which their station in life requires.

Mothers should be careful to teach their children

benevolence. Much is done in the nursery towards forming a child's disposition. A scolding mother will, nine cases out of ten, have scolding, brawling children; while a quiet, meek, but firm mother will be blessed with an orderly, peaceable and benevolent family. There is nothing more admirable than a family knit together by the tender threads of love. And there is nothing more disgusting than a snarling, quarrelsome household. By every desire for your own respectability and that of your family, let me say to you, Mothers, be gentle with your children, and by your example teach them to be gentle with each other and with their play-mates.

These things may appear trifling in the estimation of some; but let all remember that this world is made up of trifles, and mothers should not disregard the things of which we have been speaking, because they appear trifling. A drop of water is trifling; but the oceans are made of such trifles. A grain of sand is insignificant; but this earth is composed of such grains. The mind must be brought out by degrees. A child must be taught first principles. A moral and literary education has a beginning. There is an ocean, in a literary and moral sense, composed of drops. This ocean cannot be swallowed at once; but by drops it may be consumed. We are shut up to trifles at the commencement of an education.—First, we lay the foundation, then we build the superstructure; but it is unwise to despise the foundation, while we admire the superstructure whose permanence depends upon it. The mother who will neglect her child's education because she stoops to trifles in leading out its mind, will have a sorry account to give of her stewardship.—*Teachers' Magazine.*

THE SHEPHERD BOTANIST. At Eaux Bonnes, in the Pyrenees, resided a shepherd, named Sacaze; he spent his youthful summer days in tending his flocks among the mountains, where he pursued, without the help of books, his botanical studies.

When he heard, from a preacher in the neighborhood, that there were books written on the study of plants, he could not rest until he became possessed of a volume of *Linnaeus*; but the book was in Latin!

This did not discourage him; but with an old grammar and a dictionary which he borrowed, he applied himself to the book until he could read easily, not only *Linnaeus* but also the Roman classics, and even spoke the language with tolerable fluency and correctness. He has formed a collection of some two thousand Pyrenean plants, and is honored as the correspondent of *Jussieu*; yet with all his studies, he continues faithful to his lowly vocation in his native place, where he is esteemed as the best of shepherds.—*The British Friend.*

J.

IMMENSITY OF THE EARTH. About two-thirds of the earth's surface is covered with water, constituting the sea, the average depth of which is estimated at about two miles. This, referred to our usual standards of comparison, impresses us at once with an idea of the great amount investing the globe; and accord-

ingly, imaginative writers continually refer to the ocean as an image of immensity. But, referred to the mass of the earth, which in its own proper standard of comparison, it presents a very different aspect. The distance from the centre to the surface of the earth is nearly four thousand miles. The depth of the ocean does not, therefore, exceed one thousandth part of this extent, and astronomers have justly stated, that were we to place a representation of the ocean on an ordinary artificial globe, it would scarcely exceed in thickness the film of varnish already placed there by the manufacturer.

What has the School Law Accomplished?

There are some who are continually asking what good the School Law has done? There are many ways in which the good effects of the School Law are manifested.

1. The School Law has been instrumental in awakening a more general interest in the subject of education. In my visits to the various towns in the County, I have been struck with the readiness of all classes of people to converse upon the topic of education and common schools. There were individuals who took as much interest in schools as any do now, but the interest was not so general.

2. Another result of the School Law is seen in the better qualifications of teachers. Since more importance has been attached to the business of teaching, teachers have been more ambitious to qualify themselves for teaching. In the examinations of teachers, I have noticed the pride and ambition of the candidates to appear well, and they have therefore given extra attentions to the common branches, which were formerly neglected. Those who look forward to the office of teacher will be far more willing to learn to spell, read, and write, now these branches are considered so important. In examining teachers, in Wilmington, a few days since, there was quite a class of *young* candidates presented themselves, and one of them remarked that he did not expect to teach, but he wished to be examined, to see his deficiencies, so he might prepare himself for a teacher. This young man, with his compeers, appeared *remarkably well*; and there is no danger that those who manifest such a spirit, will not be well qualified to teach. When I saw such a large and promising company of young teachers coming forward in Wilmington, "here," thought I, "you may see the *first fruits* of school reform." So soon, indeed, are the people in Wilmington reaping the rewards of their efforts to improve their schools and educate their children.

3. Another result of the School Law is seen in the increasing attention given to the common branches in our Academies. Few years ago, little or no time was devoted to reading or spelling in Academies or select schools. The classes in reading were small and dull. Teachers could not persuade pupils to attend to these branches. How is it now? Why, in every Academy in the County, reading is a *prominent* study. The classes in reading are large and interesting, and give specimens of reading very different from the mumbling of former pupils. You who are ac-

tual as to the benefits of our school law, go into our Academies and hear the intelligent reading of the pupils. We may hope now, that the work of the common schools will not be put off for the Academy, and that children will learn to read and spell in the district school, as they should. The Principal of one of our Academies told me that quite a number of his pupils met one evening in a week to improve in spelling.—Who ever heard of such an exercise as this in our Academies before the school law?

4. One good effect of our school system is, that *improvements in teaching and in schools are communicated from one town to another, and from one district to another.* By means of County and Town Superintendents, of Teachers Conventions and Associations, and the intercourse of Teachers with each other at Institutes and Examinations, the towns become acquainted with each other. Good schools are known; good teachers are known. Even the towns that oppose the School Law will catch the spirit of improvement. Some light will break in upon their darkness, and they will by and by begin to be ashamed of themselves, and conclude to wake up, and go to work in good earnest to improve their schools.

I will not here allude to the beneficial influence of school supervision upon parents and teachers, and upon the scholars, in awakening interest, securing fidelity, and stimulating to improvement. I have only alluded to those advantages of the School Law which are generally overlooked, but which I think intelligent men will acknowledge result from the operation of our school system.

We ask reasonable men to examine this subject before they attempt to thwart and oppose the School Law. Have not other States adopted some school system, and found it beneficial? Shall we be left behind in the great reform of Common Schools, which is now going forward? We may just as well expect to keep up with other States in wealth without adopting improvements in agriculture, manufactures, and railroads, as to keep up with them in education without any school system. If experiment has proved railroads to be beneficial, so has experiment proved a school system to be beneficial. And one great reason why our system has not been more beneficial, is, that it has been *opposed*. The law, in many towns, has not had a *fair trial*, or any trial at all, because public sentiment has been against it. If you would see the good effects of the Law, go to those towns where the law has been observed, not where it has been trampled under foot.

It should, however, be remembered that our Law has been in operation but a *short time*, and we cannot expect *great* results so soon. The evidences of improvement appear already, but they will be more apparent in future years. He who commences improving his farm cannot expect to see all the results of his improvements the first year or the *fifth* year. Those persons who object to our School Law because it has accomplished so little, should consider how *little* we have yet done to improve our schools, and how much that little has accomplished; and also that we cannot yet see *all* the good that has been accomplished. (It

is characteristic of shiftless, inefficient, short-sighted people, to look for results *too soon*, as well in education as in agriculture, and then to become discouraged, after they have done *a little*, and sit down and do nothing. We frequently meet with farmers who undertake to improve their farms, but their crops the first year are not so large as they anticipated,—the season is bad or they make some blunder, and find it requires some more labor and expense than they anticipated, and then they call all their improvements *humbugs*, and go back to the old method. It is as unreasonable to expect to renovate our schools, as to renovate old worn-out farms, in a few years. Our School Law has, we think, accomplished enough already to encourage us to proceed in the work of reform.

JAMES TUFTS.

Habit of Reading.

Among the most useful habits that can be possessed by an individual, is the habit of reading. It is this which tends in a very great degree to mould and modify the character of every person. It is, therefore, of the highest importance that the inculcation of this habit should be made a part of every child's education. For this, in our own State, ample provision has been made by the numerous libraries which are furnished for the use of the district schools in the State. These libraries are well selected, and the good they accomplish, in infusing into the minds of our youth a love of useful information, and a strong desire to seek after it, is not to be estimated. For it is this love of knowledge and truth which constitutes the essence of a habit of reading. We do not mean by this term a passion for exciting works of fiction, which operate rather to the injury than the good of the mind, but the habit of employing the thinking powers upon subjects of real and practical utility. The mere glancing over a work, so as to obtain some indistinct and indefinite idea of its contents, without the acquisition of a single new fact or idea, can be of no importance.—This, indeed, is not reading. The few slight impressions that are made on the understanding by this means, are transient, and pass rapidly away, as the image in a mirror departs with the object from which it is reflected.

The object of reading is too often lost sight of. It is not to "kill time," nor to occasion an intoxicating excitement, by which the mind is carried away by the most preposterous fictions. Its true purpose is to supply the mind with nourishment, and to exercise its reasoning faculties. And therefore the more labor and exertion that may be employed in it, the greater is the benefit derived. A few books well read and digested, give more benefit than whole libraries, read cursorily and indiscriminately. Grimke, an eminent scholar and orator, attributes his distinction to the influence of a thorough perusal of a single book, Butler's Analogy; while thousands vainly lament over a mental dissipation, brought on by the indiscriminate perusal of the trashy literature of the present day. Our book publishers, it seems to us, undergo a great responsibility in placing before the public, in a cheap form, such publications as those with which the press

now teems. Such works are mighty agents in the demoralization of society, and ought to be classed, with respect to the evil which they produce, in the same category with the tools of King Alcohol.—*Journal of Education.*

TO PARENTS. You can see that your children attend school, *punctually* in the morning, and regularly *every day*. The tardiness and irregularity of scholars is one of the greatest evils in our district schools. Parents can correct this evil, *if they will*. In Putney the average attendance last year was much greater than the year before—the average attendance in one school of 50 scholars being 60 days' school. In most schools in the county, the average attendance is not over 40 or 45 days—more than one-fourth of the schooling being absolutely lost, *needlessly lost*, while the value of the remaining three-fourth is greatly diminished. If your children are tardy, or occasionally absent from school, they will not be interested in the school, or make progress in their studies. A few days absence frequently destroys the value of more than half the winter's school. If your breakfast is half an hour too late, it may be the means of preventing your children from being interested in their studies for that day, and so through the winter. Will you not, then, as parents, *see to it that your children attend the school punctually* in the morning, and regularly every day!—*Rev. J. Tufts.*

THE WORK OF PARENTS. The father and mother of an unnoticed family, who in their seclusion awaken the mind of one child to the idea and love of goodness, who awaken in him the strength of will to repel temptation, and who send him out prepared to profit by the conflicts of life, surpass in influence a Napoleon, breaking the world to his way.

SELF-TAUGHT MEN. There are in Massachusetts, says the *Independent*, two self-taught men, who have made themselves most thoroughly masters of the science of optics, and have constructed optical instruments of the highest perfection; and besides have become quite familiar with the wonders of nature which those instruments disclose. Allan Clarke, of Boston, a miniature painter, residing in Cambridge, has constructed several telescopes which are not surpassed by those of the most celebrated Europeans. He grinds and polishes the lenses, and has even made a splendid reflector; and he is as familiar with the telescopic objects in the heavens as with the canvases on which he earns his daily bread. J. B. Allen, of Springfield, a mechanic, also constructs excellent reflecting telescopes; and at the late meeting of the American Scientific Association, at Cambridge, he exhibited a microscope of his own make which called forth the highest admiration; and he was at once elected a member of the body.

It is said that the slaves in the West Indies steal rum by inserting the long neck of a bottle, full of water, through an aperture in the top of the cask, when the water runs out of the bottle into the cask, and the rum rises to take its place. What is the cause?

Travels of Sound.

Having to do with the instruction of children engaged in country occupations, I have called their attention to the nature of sound, from things coming under their observation, in a way something like the following:

Did you ever observe a woodman cutting down a tree at a distance? You could see the hatchet fall, and sometime after that the sound of the blow came to your ear. Do you know the reason?

Teacher: Light travels so fast that the time it takes to come from the hatchet to you is so small that it can not be reckoned; so that when you see the hatchet fall, that is the instant the blow is given; but sound coming at a very slow pace (only 1142 feet in a second,) takes as many seconds to get to your ears as when multiplied by 1142 would give the number of feet between you and the man cutting down the tree.

For instance, if it were 2 seconds, his distance would be $1142 \text{ ft.} \times 2$, if 3 seconds, 1142×3 , and so on.

Did you ever see a man firing a gun at a distance, and, after seeing the flash, have you wondered why you did not hear the sound, or that you were kept considering how long it would be before the sound came; do you know the reason—can you explain it? Because (as before) sound lags behind, and the flash takes up no time in coming to the eye.

Suppose it were 5 seconds before you heard the sound after seeing the flash, how far would you be off!— 5×1142 ; 6 seconds how far!— 6×1142 , and so on.

Supposing then, that a man were standing where you could see him a mile off, and you saw the flash of his gun, how long would it be before you heard the sound? Answer—A mile reduced to feet, and divided by 1142 would give the number of seconds before I could hear the sound.

This is the way by which we may determine how far from us lightning strikes. We see the flash and if the crash of thunder is instantaneous, we know it is very near, but if some seconds elapse after the light and before the sound, each of these seconds count for 1142 feet of distance between where we stand and the tree, or rock, or barn that is struck.

Teacher: How do you think the sound gets to your ear? The air in the gunpowder suddenly expands and disturbs the air immediately about it, or the hatchet causes a vibration or tremulous motion in the wood, which sets the air in motion all round about; and this makes a sort of circular wave, beginning from a point which gradually enlarges, one circle of the air of the atmosphere striking against another until it reaches the ear, unless it meets with some hindrance in the way; just as when you throw a stone into a smooth pond, a wave beginning from the stone spreads in every direction until it reaches the bank. The air is as necessary to continue the sound up to your ear, as the water is to make the wave come up to the bank.

ACQUIRED KNOWLEDGE. In digging at the 'placer,' you surely would not estimate the value of a day's

working by the heaps of sand and gravel washed, but by the amount of gold found.

So in estimating the amount of a pupil's knowledge, you would not inquire, how far he has gone, what he has gone over; but how much has he really got.

THREE THURSDAYS IN ONE WEEK. A scientific paper says, let a vessel sail east round the world, and arrive in port on Thursday, according to their reckoning. On the following day let the crew land; they will find it Thursday on shore. On the next day let them board a vessel which has just arrived from a cruise round the world, sailing in a westerly direction, and they will again find it Thursday on board ship. It is thus possible to find three Thursdays in one week.

PURSUIT OF NOVELTIES. I was quite amused one day, at seeing a dog chasing a crow.

He had first spied its shadow flitting over the ground; and catching a glimpse of the bird itself flying high overhead; away he went over fields and fences in a wild chase like one master fool.

So thought I, it is with some people. They light upon the merest shadow of some supposed advantage, or perhaps get a distant view of the thing itself; and then without considering whether they would be really the better for its attainment, whether their course is the proper one for attaining it, or whether the thing is really attainable, away they go in a mad chase after the crow.

EXCHANGE, is a very appropriate name for a grogery. You there exchange wealth, honor and happiness, for poverty, baseness and misery.

Mathematical Questions.

For the School Journal.

There is a circular field, surrounded by a rail fence, each length of which is six rails high and two rods long, and the number of acres in the field is just equal to the number of rails about it. Required the number of acres.

FITZ JAMES.

Answer to Mathematical Question in August No.

A cylindrical tub whose altitude should be just double its diameter and which should contain ten gallons more when full than when inclined at an angle of 45° from the perpendicular, must hold 40 gallons.

Let x = Diameter; then $2x$ = Altitude; $3.14159x^2$ = Circumference; $.78539x^2$ = area of Base; $1.57x^2$ = solid contents.

$$1.57x^2 = 9240 \text{ cubic inches } (40 \times 231)$$

$$x^2 = 5885.35$$

$$x = 18.05 \text{ inches nearly. Diameter.}$$

$$2x = 36.1 \text{ Altitude. FITZ JAMES.}$$

A ball is rolling on the ice with a force sufficient to carry it 600 feet from a certain point. On arriving at that point, it is struck exactly crosswise with a force to carry it 800 feet. How far will the ball roll from the point where it was struck? And how far would that be from the point it would have reached had it not been struck?

THE AGRICULTURIST.

Poultry.

The region about Boston has been in a sort of blaze lately about Poultry. Many new varieties have been brought into the country within a few years; some of which promise to be acquisitions of great value.—The interest had become such as, in the opinion of some, to justify the holding of a public show of Poultry, which accordingly took place in Boston, at the Public Garden, on the 15th and 16th of November. It was estimated that as many as 3000 specimens of the different kinds of domestic fowls were exhibited, and that the visitors numbered some 10,000. One goose was shown by Col. Jaques, 5000 of whose progeny had been sold at \$5 each. On Saturday many of the fowls were sold at auction at from \$5 to \$18 a pair. There were specimens from most of the New England States; but most were from within 30 miles of Boston. Among them were pullets only four months old with chickens of their own!

It appears to have been the conviction of those present that there is as much opportunity for improvement, and as much necessity for care in the choice of breeds and the selection of individual breeders, in order to profit, in this department of husbandry, as in any other.

Mr. Webster attended the show, and was among the exhibitors. He is said to have at Marshfield a very large assortment of different kinds and breeds. Dr. J. C. Bennet of Plymouth, Mass., the projector of the show, had on the ground the following assortment of fowls:

Shanghae, imported, 1 cock and 1 hen, and 2 chickens; Baylie's importation of Coochin China, 1 hen and 1 Spanish muffer; Plymouth Rocks, 1 cock and 1 hen; wild India, 1 hen; Plymouth game, 3 cocks; fawn colored Dorkin, 1 hen; white do. 1 hen; English raven, 1 hen; great Malay, 1 hen; booby, 1 hen; African bantams, 1 cock and 1 hen; Shanghae, 1 cock and 1 hen; Plymouth Rocks, 3 hens; imported, Poland, 1 cock and 3 hens.

John Giles, Providence, R. I.:—3 specimens of Bolton greys; 1 pair Shanghae fowls, 18 months, and 3 fowls 14 weeks old; 3 Dorking fowls; a lot of Guinea fowls; 1 pair of imported white swans; 1 pair of barnacle geese; 1 Poland gander; 1 drake and 2 Aylesbury ducks, imported; 3 Java fowls; a lot of African bantams; a pair of wild turkeys; 1 pair of Muscovy ducks; 1 pair fan-tail shaker pigeons; and a pair of black and white carrier pigeons.

There were about 120 other exhibitors.

Among the kinds of the barn-door fowl not named above, we notice the golden pheasant, English creep-er, white bantam, Java, silver pheasant, Bucks county, white Poland, English grey, Dominique, silver and golden Polands, Irish bantam, white China, Italian, Bolton greys, frizzled Italian, Gnelorland, creole, silver top-knot, African, white Spanish, muff, white-topped bantam, Boston favorite, Dutch pencilled, white frizzled, French bantams, &c. How many of these may be synonyms we cannot guess.—One gentleman had 10 kinds of fancy pigeons.

The show appears to have been a very gratifying one, and will doubtless give fresh impulse to the breeders in Massachusetts, who are selling their choice fowls at \$2, \$5, and \$10, a pair.

We copy from the Boston Cultivator a statement showing the importance of the poultry business.—Every farmer has something to do with it; and it is for every one's interest to look out for improvements, and,—when anything like a mania prevails—to beware of imposition and of changes for the worse.

As to the breeds, there is probably nothing else equal to the Poland of pure blood for eggs; and as that kind is more easily obtainable than the Coochin China, and other large and new kinds, it is safe to fix upon that for breeding, at least until a choice of another can be very deliberately made.

The Poultry Business.

The breeding and rearing of Poultry is not second in importance to scarce any other article of stock in New England. By reference to the Agricultural Statistics of the United States, published in 1840, it will be seen that the value of Poultry in the State of New York, was two millions three hundred and seventy three thousand and twenty-nine dollars! which was more than the value of all the swine in the same State; nearly one-half the value of its sheep; the entire value of its neat cattle, and nearly five times the value of its horses and mules!

The amount of sales of Poultry at the Quincy Market, for the year 1848, was six hundred and seventy-four thousand four hundred and twenty-three dollars; the average sales of one dealer alone, amounting to twelve hundred dollars per week for the whole year. The amount of sales for the whole city of Boston for the same year, was over one million of dollars. The amount of sales of eggs in and around the Quincy Market for 1848, was one million one hundred and twenty-nine thousand seven hundred and thirty-five dozen, which, at 18 cents per dozen, makes the amount paid for eggs to be, two hundred and three thousand three hundred and fifty-two dollars and thirty cents; while the amount of sales of eggs for the whole city of Boston for the same year, was a fraction short of one million of dollars; the daily consumption of eggs at one of its hotels being 75 dozen daily, and on Saturday one hundred and fifty dozen. One dealer in the egg-trade at Philadelphia sends to the New York market daily, nearly one hundred barrels of eggs, while the value of eggs shipped from Dublin to Liverpool and London, was more than five millions dollars for the year 1848.—*Boston Cultivator.*

FOOD FOR POULTRY. Boil up a quantity of onions in water. When the onions become soft, mash them up, and with the water stir in Indian corn meal till sufficiently thick to give out to the hens and chickens when cool. They will eat it, and not a louse will be found on them twenty-four hours after, and they will cease to infest their roosting places after. We made a trial of the above remedy late last fall, and have not been troubled with lice since.

Acknowledgements.

Our acknowledgments are due Mr. JOHN HISSARD, of Lebanon, N. H., for fine specimens of a pear raised by him; which we find to be the *Dorr Pear*.

From A. P. TOLBY, of Chester, we have specimens of the *Wine Apple* (not the *Wine Apple* of Downing, but No. 46 in Cole's Fruit Book), very beautiful and excellent; the *River Apple* and *King Apple*, both handsome winter fruit, but not yet tested. *Porter Apple*, very fine specimens. This admirable fruit succeeds perfectly in our vicinity, and promises to rank here as first among fall apples.

From H. CHASE, Esq., Cornish, pears that we have not met with elsewhere,—small, green, very juicy and melting, and of a lively, pleasant flavor. The *Newtown Pippin*, which proves hardy with him; but the fruit here does not equal the reputation it bears in New York. Another apple handed us by Mr. Chase we find excellent for baking,—very tender, with a remarkably lively, pleasant sub-acid flavor.—Size medium; resembling the Hubbardston Nonesuch in color and flavor.

From Col. L. CHASE, of Cornish, fine specimens of *Isabella* and *Seedling Grapes*. Of the excellent promise of some kinds of the latter we have before spoken.

From IRA HAZEN, Norwich, *Seckel Pears*,—small, and not perfectly ripened. The tree is hardy; but not much good fruit has been obtained from it here.

From J. D. HATCH, of this village, (fruit grown by Dr. Hatch, of Burlington), the *White Doyenne* and *Seckel Pears* and *Fameuse Apple*. The pears sent by Dr. H. are very fine specimens; we have never seen them surpassed anywhere; and the *Fameuse* apples were *perfect*,—which is not common even at Burlington.

From THOMAS HAZEN, Norwich, fruit and scions of a beautiful, striped, sweet apple, above medium size, very tender, and of excellent flavor. It bakes as quick as a sour apple. It is represented to be an excellent bearer, and appears to be worthy of extensive trial.

From J. L. LOVERING, Hartford, *Sweet Potatoes*, raised by him, well ripened, and of excellent flavor; which is more than we can say of any that we have known raised so far north before.

A fine apple handed us by Mr. WAIR, of this town, for a name, is the *Yellow Bellflower*.

From S. RICE, Esq., Quechee, a large, handsome apple, tender, of fine texture, and with a very pleasant, sub-acid, slightly aromatic, but not high flavor. We understand it to be a seedling, and a good bearer. Its qualities recommend it as likely to be a popular fruit.

Ringling the Grape-Vine.

A friend showed some very fine *Isabella* grapes to us a few weeks ago, that were larger than usual, both in bunch and berry, which he said were produced by girdling or ringling the vine. About the time the fruit sets, he takes from the vine a ring of the bark, about an inch in length. This prevents the return of the sap in the bark, and it is applied to the

nourishment of that branch, and the fruit is not only larger but it ripens considerably earlier. In the fall, the extending bark, on each side the ring, becomes nearly united. If it does not unite, all the vine above the ring will die. This mode would be well adapted to cane pruning; the girdled vines would be cut out in fan pruning.—N. E. Farmer.

REMARK. We tried this process last season upon the *Isabella* and Miller's *Burgundy* grapes, with results like that mentioned above. The berries on the girdled branches were not only much larger, but earlier than those on the ungirdled ones. The result was particularly striking on the Miller's *Burgundy*—a small grape generally, and here very liable to crack and mildew, but in this case perfectly ripened, in splendid clusters, with some berries $2\frac{1}{2}$ inches in circumference.

We removed the bark, however, after the grapes had begun to swell—say when they had attained one-fourth their usual size. EDS. VT. AGRICULTURIST.

Black Warts on Plum Trees.

These warts and the curculio are great evils, and the principal ones with which the fruit-grower has to contend in raising plums. They have long been subjects of close investigation to the scientific and practical man, without satisfactory results. The following interesting remarks on the black wart, are from Miss Grace Darling, who had peculiar advantages for observations, in the numerous horticultural experiments of her distinguished father, the late Judge Darling, of New Haven, Conn.—N. E. Farmer.

MR. COLE: I hope you will pardon the liberty I take in writing to you, as I noticed, in your excellent work on fruits, that "no cause had as yet been assigned for the appearance of black knots on plum-trees." They seem to have been entirely exterminated from our trees, by cutting off the branches infected and burning them. I obtained some which contained two sorts of insects: the one a thick, short, whitish little grub, destitute of feet, the other longer and more slender, of a color inclining to a reddish-brown. I kept them in a tumbler, partly filled with moist earth, and covered with glass. The white larvæ went into the ground, and in a few weeks came out curculios; the others went into the chrysalis state in and on the excrescences, and hatched out about the same time the curculios did. These proved to be a small moth, about a quarter of an inch in length, of a light brown color, with three large spots of a dark brown on the hind margin, and a line of the same color running across the middle of the wings, pointing backward, so as to form the letter V. They all died very soon, probably from confinement.

I have examined numbers of the warts, and always found the caterpillars of the moths more plentiful than the curculios; but why they should inhabit the same place, and which the author of the mischief is, I am unable to say. I have, however, come to the conclusion that it is the curculio which makes use of the young and tender twigs in default of plums, from this fact: the moth never seems to have bored for itself,

but occupies the cavity left by the curculio; and also in years when the crop of plums has failed, the number of black excrescences have very much increased. In an instance a few years since, wild cherry trees, and plum of the natural growth, were literally covered with them, while the budded and more choice varieties escaped. Respectfully, G. D.

REMARKS.

The fact observed by Miss Darling has been noticed before, by Dr. Harris and others. It is still uncertain, however, whether the curculio causes the black wart, or only uses it instead of a green plum to deposit its eggs. It is known that the curculio sometimes appears late in the season. We have ourselves seen it making its crescent mark upon a ripe plum in September. Downing supposes it does not cause the black wart, but that it stings the excrescence, when young and tender, and hence the fact that the grub is sometimes found in it. The black wart does not by any means always contain a grub. We have carefully dissected many in different stages, but have only once or twice found a grub.

The Black Wart Cured. In June last we applied to a black wart of recent origin, a composition which *completely killed it*. Lime, slacked with brine, and a very little white vitriol added, was put on in the form of a thin paste, and the coating, an eighth of an inch thick, allowed to remain as long as it would. The wart was killed—entirely eradicated down to the sound wood; and the spot is now healing over, with healthy lips on every side. Whether all the ingredients are necessary, and if not, which may be dispensed with, we shall try to satisfy ourselves next season; and also to determine whether, as we now believe, we have really found a specific for so troublesome a foe to the plum-growers.

EDITORS VERMONT AGRICULTURIST.

Different Breeds of the Domestic Fowl.

THE QUALITY OF THEIR FLESH.

The quality, that is the fineness, juiciness and richness of flavor of the flesh of domestic fowls, is of much more importance than their size; and I consequently reject all coarse-meated fowls, however large they may be. There is no difficulty in discriminating between coarse and fine fowls at any time. When chickens, if the down is straight and stands out, and the body and limbs are loosely joined, the meat is coarse; but if the down is glossy, and lies close to the body, and the body and limbs are compactly formed, the meat is fine; and when grown, if the fowl is light in weight in proportion to its size, the flesh is coarse, but if heavy the flesh is fine. There is also a *fitness* in the quality of the flesh: for if the meat is fine, the bones are fine, and the feathers are fine, and *vice versa*. If the flesh is fine, it is juicy and richly flavored: if coarse, dry, fibrous and insipid. The color of the legs, too, is quite material in judging of the quality of fowls. All other things being equal, dark-legged fowls have the finest flesh, and are the most hardy. Turkeys, which have the

finest flesh of all fowls of their size, have black legs; pheasants, partridges and quails, all of which are very fine-fleshed fowls, have dark legs; the game cock likewise, which is universally acknowledged to be the finest-fleshed of all domestic fowls, except the Wild India Fowl of Calcutta, has dark legs; and this is equally true of the Wild India Fowl itself, the specific gravity of which, likewise, exceeds that of any other fowl. I do not wish to be understood, however, to say that all dark-legged fowls are fine, or that all yellow or white-legged ones are coarse, for much depends upon the breed: but I do say that the darkest leg which pertains to the breed, indicates the finest fowl. For instance, the Shanghai Cochins China Fowls, "of the pure blood," always have their legs of a bright red and yellow mixture, beautifully shaded together. Now, if you wish to select a fine fowl of this breed, choose one of the darkest shade of these colors. The Great Java Fowl, of pure blood, uniformly has black or very dark legs; and if you wish a fine-fleshed one of this breed, select one with the blackest legs. The black Poland Fowl, of pure blood, has white or blue legs; select the blue for the finest, that is, select the darkest of the natural color, whatever that color may be. Fowl fanciers always select yellow legs; but fowl eaters, that is, those who regard the quality of the bird, select dark legs. The color of the feathers, too, has more or less to do with the quality of the fowl. Some breeds have much more brilliant plumage than others: but, when we speak of the brilliancy of the plumage, we mean in comparison with others of the same breed. If, therefore, you select a fowl of rich and glossy plumage, when compared with others of the same breed, depend upon it, the legs will be dark of the kind, and the quality of the bird will excel.—*Boston Cultivator*.

IRON FOR APPLE-TREES. A correspondent of the Albany Cultivator, writing from Fredericksburg, Va., says: "A friend, who has a large orchard of 'Raule's Janette apple' has ten trees, upon one corner of the orchard, which always produce fruit a third larger, and flavor so much superior, that it was supposed, by all who saw and ate the apple, that they were a superior variety of the Janette. This spring I examined the soil, and found that a vein of iron ore passed just under the ten trees, so near the surface that it had been ploughed and worked up with the top soil. A variety of the large Blue plum, growing upon the same ground, is also very fine; while grafts taken from the same plum-trees, and worked upon stocks grown on different soil, prove worthless."

PLANTING TREES ON WET GROUND. Mr. Thomas Mehan, of Philadelphia, in the Horticulturist for October, gives a method of planting trees on wet ground. He digs the ground deep, as if for ordinary planting, and then lays the roots flat on the surface, covering them first with broken sods, and then with fine soil. He plants on the ground, instead of in it. Evergreens planted in this manner on wet land, have flourished, when trees planted deeper have looked sickly.

Bartlett's Double Plow.

The President of the Middlesex County Agricultural Society—Hon J. T. Buckingham—publishes in the Boston Courier the following notice of this useful implement. He says:—

Being at Worcester, a few days ago, I was invited to examine the Double Plow, recently patented by W. O. Bartlett, Esq., of that city, and to see its operation. It is a very simple machine. It is, in fact, two single plows yoked together, and, like a well trained yoke of oxen, that will do their work without a driver, seems as if endowed with sufficient intelligence to perform its office without much labor on the part of the plowman. The machinery, by which the two plows are connected, is so contrived, that they accommodate themselves to the ground. I never saw a more beautiful agricultural operation. It was in a field where corn had been raised the past summer, and which, though not stony, had rather a diversified surface of plain and valley. The plow was drawn by a single team of oxen, attended by one man, whose attention seemed to be necessary only when he came to the end of his furrow, to turn the plow into its proper position for another. He walked generally by the side of his team. The man, the team and the plow, seemed to be so many parts of a well-adjusted, self-moving machine, that only required winding up to keep it in constant motion. If any one should have occasion or inclination to write a Lecture on the Poetry of Husbandry, let him first go to Mr. Bartlett's farm, where he may get inspiration from the Double Plow, and learn wisdom from various improvements, which are there in progress.

I think that no one, who has seen the operation of this plow, can, for a moment, doubt its superiority over every other instrument that has ever been invented for tilling the ground. On some soils, it may require more draught than the common single plow, (though I am not certain of that,) but if it should, this requirement is immensely over balanced by the amount of work performed. It requires no uncommon sagacity in a farmer to perceive that he is in all respects a gainer, when he can perform in a single day the labor that had formerly occupied two or three. There is no doubt that a good team, either oxen or horses, would plow four acres in a day, with this simple machine, and the plowman would have the pleasure of seeing, at its close, his fields with a new surface, beautifully turned up with furrows of uniform width and depth, and in parallel lines, almost as straight as if drawn by a strict mathematical process.

Mr. Bartlett,—a young man, and engaged in business as a lawyer in the city of Worcester,—in pursuing the practice of husbandry, on a scale that would terrify, and in a style that would astonish, some of our respectable farmers, who consider every improvement as an innovation, and are afraid to do any thing in a manner different from that of their fathers, lest they should be suspected of book-farming. He has two hundred acres, purchased about two years ago in a state of great impoverishment. Many of its acres were in too poor a condition to produce sorrel, and

were covered with dry moss. The past season, he raised wheat at the rate of twenty-five bushels to the acre, and his rye (I think he told me) yielded thirty bushels. He had just harvested corn from fourteen acres, on which a hoe had not been used during the whole season, the labor having been performed by means of a Plow, and Corn-Planter, and the Cultivator. The amount of the product was not mentioned, perhaps not known, as the process of husking was going on, but it was such as will afford a rich compensation for the labor and capital expended. Mr. Bartlett's prime object is to make manure, and with it to make this old and worn out soil, a source of profit and of wealth. There is a beautiful supply of muck and peat on his land, which is daily undergoing a scientific process of conversion to manure of the first quality. His domestic animals are highly fed, and are, consequently, well fitted to coöperate with their owner in effecting his purpose of enriching his land, by returning to it in the shape of manure, the greater part of what it produces.

It there should be any young man, son of a farmer, living within twenty miles of Mr. Bartlett's premises, who has a notion of going to Boston in search of any kind of employment which that city can supply, let him first make a visit to Mr. Bartlett, see his operations, examine his theory, and ascertain its practical results; if such young man has common sense, and ordinary sagacity, he will at once give up his Boston notion, and stick to the country, where an acre of ground is better capital than a note discounted at the bank, with the proudest merchant in the city for an endorser.

Breeds of Cattle.

We talk about the breed of cattle, and to be sure, it is very important. But allow me to say, that no breed can be good, and strong, and fat, and handsome, without good keeping. We must adopt the three rules which the old Cato gave with regard to the raising of animals—"Feed," "Feed well," "Feed high." ("Cato's the man—three cheers for Cato's rules.") Now, gentlemen, we see in the eastern part of this Commonwealth, cattle not such as they should be, because we see pastures so dry, so rocky, so covered with bushes, that they would be able to defy all the breeds in creation. The great point to which improvement should tend is, to *improve the means of sustaining animals—to increase the quantity and improve the quality of the food for animals.* And I believe, that in pursuit of that end, when the turnips of Norfolk will compare not unsatisfactorily with the turnips in England—when there will be numerous individuals who have made their fortunes in this species of culture, that good breeds will necessarily arise. And here again I would refer in rather more serious tone to Mr. Quincy, of Quincy, whether every thing of profit in animals does not depend on the mode of keeping. That is my opinion, and I record it now, and I leave it recorded for future use. It may not come into fashion in my day. If you do not try it, your children will try it. And if there be any young man here, with a few acres fit for this purpose—if he will

put it into proper shape and obtain the seed of the sweet turnip, (and it is better to send to England for it) and put it into the ground between the fourth and tenth of July—pay some little attention to it, thin it out well once, and if it does not turn out the best and most profitable crop that he has ever had, I wish him to come down immediately to Marshfield. (Applause). Webster.

From the Germantown Telegraph.

Molasses in Fattening Hogs.

One of the best articles I have ever experimented with in fattening swine, is molasses. When it can be obtained for one shilling and sixpence per gallon, it is cheaper than corn at the lowest price at which that grain is ever likely to be offered in any market out of the "slave growing" States. By mixing saccharine matter with corn or barley mush, I can fatten my hogs in one half the time which is consumed by my neighbors who turn up their noses with ineffable and undisguised contempt at my "ultra book farming fancies,"—wise Solons of the sod, in *fleshing* not *fattening*, theirs. Has it never occurred to you that the omnivorous quadruped, nomenclated the hog—(*sus scropa*) by learned naturalists, hath an appetite very peculiar? He likes greatly either food that abounds, in saccharine matter or in acids. He will fatten on meal sweetened; or meal acidified, and I am really at a loss to decide on which the more rapidly. I find that apples boiled and permitted to stand awhile, are eaten voraciously by this worthy animal, abhorred by the Jews, and that he is fattened on them nearly or quite as rapidly as on meal or corn. I some years since, slaughtered a hog weighing five hundred pounds after being dressed, which, for seven weeks before he was killed ate nothing but apples. They were the refuse of my crop, and being deposited, in the harvest seasons in an open chamber, had become thoroughly frozen. This process of freezing, although it is in some measure qualified, did not by any means, effectually neutralize the acidity, as the cooked apples to the hog were quite sour. They were eaten with avidity, and the animal retained his health and bodily vigor surprisingly until brought to the tub. Thinking, first before killing him, that a corn keep would tend to solidify the pork, I procured the meal, and had an allowance of dough presented; but *mirabile dictu*, he refused it with contempt. This he did for two days, when, fearing that he could not be induced to partake of it—of which indeed there was no prospect, the old food was restored, and on this he was kept during his life. Finer or sweeter pork I never ate. I have also fattened swine on saccharine food with equal facility.

A MONTGOMERY COUNTY FARMER.

October 10, 1849.

RENOVATION OF OLD APPLE TREES. The following information received from a gardener, who for many years largely supplied the London Market with fruit, may probably be new to many of our readers: It is generally found that after an apple tree has borne for a certain number of years it becomes comparatively

unproductive. It has been usual in such cases to remove the old tree and replace it by younger ones.—This may be obviated by regrafting the old tree; and according to the testimony of the gardener above mentioned, the older the stock, the better the quality of the fruit. He had scarcely a tree of any age, among several hundreds that his orchard contained when the writer visited it that had not undergone this process, and in some cases more than once. There were trees whose trunks were so hollow as in some parts to be little more than a shell, which had been subjected to this operation the season before, and, judging from the vigorous appearance of the grafts, with perfect success. The plan he adopted was the following: The ends of branches were sawn or cut off where they were about the size of a man's wrist, or rather less, and two or more scions inserted in each, according to circumstances. By this means, in the course of three years he obtained a large, full-bearing tree.

Fruit Trees—Garden Vegetables.

Having observed the great success of Mr. Jacob Dow, of the West Village in this town, in raising onions for a few years past, and the attention he pays to fruit trees and the garden, we requested him to give us some account of his proceedings and his success. Agreeably to this solicitation he informs us, that he has four acres including his buildings inclosed with a substantial stone wall. The soil is a black mould resting on a gravelly pan. On this lot he now has 110 standard apple trees growing, and 176 peach trees, all of which were set out in the spring and fall of the year 1845; they present, as we have observed, every evidence of thrift, and brief as the time is since they were planted, some of them have trunks fourteen inches in circumference. At this rate of growth every one can see we need not despair of eating the fruit of our labors, when we plant a tree. Mr. Dow's apple trees are set two rods apart each way, with a row of peach trees each way between them; the peach trees being an early bearer and short lived, will die out by the time the apple trees come into full bearing, and thus leave the apple trees the exclusive possession of the soil. Mr. Dow has also 3,000 nursery trees of three years growth, all of which are grafted or budded with the most approving kinds of fruit.

In the fall of 1846 Mr. Dow manured a piece of ground, and sowed it with apple seeds; in the spring of 1848 he transplanted the trees into nursery rows; and then without additional manuring, he sowed the land with various garden seeds. From 30 rods of ground he raised 5 bushel of early beets, 70 heads of cabbages, 50 bushels of English turnips, and 100 bushels of carrots, which would be at the rate of 1000 bushels to the acre, had the ground occupied by the cabbages been planted with carrots. He manured the same ground from his barn cellar last spring and sowed it with onions, of which he has gathered 84 bushels, 64 of them being raised on 18 rods of ground, few seeds having come up on the remainder of the piece, which is at the rate of nearly 570 bushels to

the acre. Some of the onions measured sixteen inches in circumference, and were as excellent in quality as in size. Some of his trees have grown five feet from the bud the past season, which is uncommon thrift, since the growth of young trees is as much impeded by severe drought, as other plants.—*Cong. Journal.*

Wagons and Carts.

A farmer in England, named Edward B. Liddington, has produced a prize essay on the comparative merits of wagons and carts, which should arrest the attention of our farmers; for if he is right, our farmers in general, are wrong. After five years' experience with wagons, and nearly the same with one horse carts, on a farm of one hundred and seventy acres of arable and eighty acres of pasture, he came to the conclusion that the carts were of the greatest advantage. As our farmers all use wagons, let them pay some attention to his statement. He says: "I have no light plowed land, nor have I more than twenty or thirty acres of very heavy land. I will therefore relate my actual experience. In the employment of wagons and the old broad wheeled dung carts, I required one wagon, one cart, and three horses to every fifty acres of arable land. I also kept a light cart for general purposes. Now that I am employing carts, I find that I get through my work much more easily with two horses and two carts to fifty acres."

In the calculation of items, his saving was nearly four dollars on the cultivation of one acre, in the year. Again he says, it is admitted that one horse attached to a given weight, will move it more easily than two horses attached to double that weight. This arises not only from the advantage gained by having all the power of draught close to the work, but also all the power applied at the same moment, which is almost impossible where two or more horses, having different wills and steps, are attached to the weights; and for the same reason, one horse will travel more quickly.

When a cart is filled, there is no delay in attaching the trace-horses, during which operation one horse would be two hundred yards on the road. I know this might be done more quickly by having men ready to change the horses, as in the practice of opposition coaches, but I am speaking of the matter of fact working of the system. Then again, when the load is deposited, the one horse turns in much less time than the two or three. These facts are too self evident to admit of their contradiction; indeed, I believe the economy of carting manure with one horse carts is generally allowed, but the employment of them in harvesting is much objected to. In this respect, however, I find them equally expeditious and economical. My actual experience is, that three carts, with the harvest frames attached, will convey as much hay or corn in the straw as two wagons, and that they are bound with the ropes in the same time; therefore no time is lost in binding. They are easier to pitch into than wagons, and not more difficult to unload; and all the advantages are gained of speed in traveling.

My attention was first drawn seriously to the subject from hiring a man to draw some stones for drain-

ing. He came with a horse only fourteen hands high, and a small cart, when the work he accomplished so surprised me that I at once decided to try two light carts, which after succeeding well in all other operations, I employed in the harvest field; and being fully satisfied with them in this capacity, I soon discarded every wagon from the farm.—*Exchange.*

Fattening Cattle.

At a recent meeting of the "Farmers' Club," of Loughborough, England, the subject of Fattening cattle was discussed, when Mr. Bernays (Chemist) rose and said:—

"In order to obtain a fair proportion of fat and lean, it is of the utmost importance that you should be acquainted with the composition of food. We should be very much mistaken were we to judge of the value of food by its bulk. Green-top turnips, mangel-wurzel, and red beet, contain 89 per cent. of water; Swedes, 85 per cent.; potatoes, 72 per cent.; oats and wheat straw, 18 per cent.; hay, peas, and lentils, 16 per cent.; and beans only 14 per cent.—Hence the latter food is infinitely superior, as to its feeding properties, to the former. But we have only spoken of the food in relation to water; it is necessary that we should understand each other when we make use of terms. It is but too indefinite if we include fleshening and fattening in the term *fattening*; the term *rearing* would then be more appropriate.—But it would be still better if we distinguished between *fleshening*, or the formation of muscle, and *fattening*, or the formation of fat. According to the quantity of non-nitrogenized constituents of food capable of forming fat; in other words, according to the supposed fattening properties of food, they rank thus:—1. oats, barley meal, and hay; 2. beans and peas; 3. lentils; 4. potatoes; 5. turnips and red beets. According to their fleshening properties, they stand thus:—1. lentils; 2. beans; 3. peas; 4. flesh; 5. barley meal; 6. oats; 7. hay; 8. carrots and potatoes; 9. red beet; 10. turnips. One hundred pounds of lentils are supposed to be capable of yielding 33 times as much muscle as 100 pounds of turnips. Great advantage, therefore, results from the admixture of food. An animal which has been fed chiefly on oil cake, would, on being turned out, increase in size much more slowly than the animal which has been fed on hay, or on turnips and hay. The oil-cake produces chiefly fat, and little flesh; hence the movement of the animal will consume much of the ready formed fat or tallow. It is only when the oil-cake is given with fleshening food—such as beans, oats and hay—that lean is proportionally formed. Warmth, confinement, and fattening food are most favorable for the formation of butter, fat, and tallow. Herbage—which is generally denominated *poor*; but which, in reality, is *rich* in nitrogenized constituents, and which cows have to crop themselves—is favorable to the formation of cheese, but not of butter.

ADVANTAGES OF WETTING BRICKS. Few people except builders are aware of the advantages of wetting bricks before laying them. A wall twelve inch-

es thick, built with good mortar, with brick well soaked, is stronger, in every respect, than one sixteen inches thick built dry. The reason of this is, that if the bricks are saturated with water they will not abstract from the mortar the moisture that is necessary to crystallization, and, on the contrary, they will unite chemically with the mortar, and become as hard as a rock.

The more I see and try experiments in farming, the more I am convinced of the truth of an opinion long entertained—that if the best farmers in our country would either sell off half their land, or borrow (if they have not the money in hand) forty or fifty dollars per acre upon their farms, and judiciously apply it to fertilizing the soil, they would, with less labor and cost than with what they are now merely maintaining themselves, double their estates in ten years.—*Working Farmer.*

NEW DISCOVERY IN AGRICULTURE. An extraordinary fact was mentioned the other day at the sitting of the Academy of Sciences. One of the members stated that the Agricultural Society of Brest had, upon the proposition of a member of the committee, sown some wheat upon land without any preparation of plowing or digging, and in one of the worst soils possible, and, after having merely walked over the ground to press the grain on the surface, had it covered with fresh straw to the thickness of two inches. The product was, it is asserted, more abundant and much superior in quality to wheat raised from the same seed in the ordinary way. Some ears of wheat, the seed of which had been placed upon window glass covered with straw, were also exhibited.

VIRTUES OF SMART WHEAT. It is almost a sure remedy in case of colic. Steep and drink the same as any other herb tea. In the next place, it is worth five dollars per hundred for a stock of cattle, if it is cut and well cured when in full bloom. Give an ox, cow, or horse, one pound per week, during the time they are up to hay, and it will keep their bowels and hide loose. It is an excellent physic. If a horse has one pound per week, there is no danger of his having botts, or worms of any kind; and they will eat it sooner than they will the best of hay.—*Guernsey Jeffersonian.*

CAMOMILE. A few roots of this plant should have a place in every garden. Not only are its medicinal qualities highly valuable, but its presence among vegetables is supposed to be an *Ægis* of protection against many diseases to which they are subject. It should be transplanted into warm and rich soil, early in the spring, and be assailed during its early development, by copious manuring and frequent pressure. When plants, late in the season exhibit symptoms of decay or general debility, the planting of a small root of Camomile in their vicinity is frequently the most speedy and efficacious remedy that can be applied.—The odor, or aroma, diffused by this plant, is also known to be highly repellant to many kinds of aligerous insects, and its presence among those species

of plants and vegetables infested by such enemies, will protect them more effectually than almost any other agent known, and at comparatively small expense.

The Markets.

CAMBRIDGE CATTLE MARKET, Nov. 28.

At market, 750 Cattle; about 300 Beeves, and 450 Stores and Barrelling, consisting Oxen, Cows and Calves, Two Years Old, Three Years Old, &c.

Prices. *Market Beef*—Extra, \$6 per cwt.; first quality, \$5 25; second \$4 50; third \$4.

Barrelling Cattle—Mess \$3 50; No. 1, \$3; No. 2, \$2 50. Hides 4½, Tallow 6c per lb.

Stores—Working Oxen—\$50, 60, 75, a 85. Cows and Calves—\$16, 21, 27, a 32. Yearlings—\$5, 8, 11. Two Years Old, \$10, 14, 17, a 25. Three Years Old, \$12, 17, 24 a 30.

Sheep and Lambs—3,100 at market. Prices—by lot—one lot of 320 sold at \$1 25; one lot of 140 sold at \$1 34; two lots, one lot of 230, the other of 500, sold at \$1 50; one lot sold at \$5 each; other lots sold at \$1 12½ a \$1 50.

Swine—4 a 4½c. Retail, 4½ a 5½c.

Remarks:—The market remains the same as at our last quotations. Number in market is less than at any time for the last ten weeks.

17 Cars came over the Fitchburg Railroad, and 10 over the Boston & Lowell Railroad, loaded with Cattle Sheep and Poultry.

Number from each State: Maine—215 cattle, 400 sheep and lambs; New Hampshire—200 cattle, 1100 sheep and lambs; Vermont—190 cattle, 1500 sheep and lambs; Massachusetts—70 cattle, 120 sheep and lambs; Canada—82 cattle.—*Advertiser.*

BRIGHTON MARKET, November 28, 1849.

At Market—550 Beef Cattle, 375 Stores, 2200 Sheep, and 780 Swine.

Prices—*Beef Cattle*—In consequence of Thanksgiving this week, purchasers were not very spirited, and prices had rather a downward tendency. We quote extra \$6 a 6 25; first quality \$5 25 a 5 75; second 4 75 a 5 25; third, 3 75 a 4 25.

Stores—Two years old \$8 a \$14; three years old \$14 a \$25.

Working Oxen—Sales at \$65, 80, 85, and 88.

Cows and Calves—No sales noticed.

Sheep—Dull. Sales \$1 42, 1 62, 1 75, 1 92, and \$2 25.

Swine—A lot of fat Hogs to slaughter, 4½; a lot of Shoats to peddle, 3½ and 4½; at retail from 4 to 5½.—*Advertiser.*

FANEUIL HALL MARKET.

WHOLESALE.		EGGS, DOZ.	
Beef, fresh, lb.	7 a	Apples, barrel,	2 50 a 3 50
Mutton, 1st qual.	6 a	Beans, bush,	1 50 a 1 75
" 2d "	4 a	Peas, bush,	0 00 a 0 00
Lamb, lb.	3 a	Potatoes, barrel,	2 00 a 2 50
Veal, lb.	3 a	Onions, bush,	75 a 0 00
Pigs, roasting,	1 00 a 1 22	Honey in comb,	10 a 20
Chickens, per lb.	10 a 14	SEED—RETAIL.	
Turkeys, per lb.	10 a 14	Clover, North, lb.	12½ a 00
Geese, mongrel,	1 25 a 1 50	Southern,	8 a 9
Pigeons, dozen,	1 00 a 1 25	White Dutch,	20 a 25
Pork, per 100 lbs.	5 50 a 6 25	Lucerne, or French,	33
Lard, best, pr. bbl.	7 00 a 7 50	Herdgrass, bush,	3 50 a 0 00
Western, keg,	7 50 a 8 00	Red Top, bush,	
Butter, lump, lb.	20 a 25	Northern,	1 25 a 0 00
do. skrin,	12 a 18	Southern,	00 a 8½
Cheese, new milk,	6 a 7	Orchard Grass,	— a 2 00
do. four meal,	5 a 6	Fowl Meadow,	2 50 a 0 00

WOOL. BOSTON, November 25. American Fleece in good demand at former quotations.

TO CURE A COLD. The present winter has been characterized by the severity of colds, with which almost every body has been afflicted. We ourselves have had one, the most obstinate we ever had, confining us to the house for two weeks, and by an almost incessant cough forbidding us to sleep day or night. We tried various remedies, until we wore them out without realizing any desirable effect, and at last we heard of and tried the following, to wit: Take good thoroughwort, hoarhound and pennyroyal, of each a good handful, and boil them in just water enough to extract the strength; then strain off the liquor and add an equal quantity of molasses, and boil until it forms a candy. Eat freely of this every time an inclination to cough is felt, and your cough will soon leave you. After using this candy for half a day, we had a night of good sleep and found our appetite much improved next morning.—*New England Farmer.*

PLANTING CHESTNUTS. At a late farmers' meeting in New York, Mr. Rice, speaking of planting chestnut timber, remarked that he plowed up a tract of unproductive hill-side, several years ago, and planted it with the chestnut, in rows four feet apart every way. The sprouts coming up rather crooked and scrubby, he went over the field, and cut them down close to the ground, which caused new sprouts to shoot up straight and vigorous. The trees are very thrifty, completely shading the ground, and grow more and more rapidly as the soil becomes strengthened by the annual deposit of leaves. So well satisfied is he with the experiment, that he is now placing other worthless lands in a similar course of improvement.

Sheep.

HOW THE BUYER IS TO KNOW IF THEY ARE HEALTHY.

Sheep are so liable to various diseases, that much care is necessary on the part of the purchaser, especially when they are intended for breeding-stock. As to the signs of unsoundness in sheep in the butcher's shambles, it would be almost needless to give any directions, for few purchase their own meat, and those who do, would not take the pains to learn how to judge. In towns, the market-money is usually given to servants, who take what good judges would reject.

In marketing, we have all our lives observed one rule—that is, to leave nothing of *its kind* better behind than that which we bring away. To be sure, an article may be of a price too long for the length of your purse, in which case it is easy to let it alone; but rather get never so little of that which is the best of its kind, than buy that which is inferior because it is cheap.

As to mutton particularly, we are apt to be captivated by its grossness, rather than its juiciness and tenderness; hence a Diabli, all fat and no flavor, will sell more readily than a well-flavored, juicy South-down. But our present business is with the signs of health in sheep intended for breeding-stock. The appearances of soundness and vigor of constitution are, a lively briskness of temper; a brilliant clearness

of the eye; a florid, ruddy color on the inside of the eyelids, nostrils and gums; looseness in the teeth; a sweet, fragrant breath; dryness of the nose and eyes; the breathing easy and regular; coolness in the feet; everything properly formed; fleeces firmly attached to the skin, and unbroken; and the skin exhibiting a florid, red appearance.

Now, reader, will this go in at one ear and out at the other, or will you examine your own sheep, and be guided by these directions in purchasing? Are our signs true!—if not, wherein are they not?

The preference for fat meat in England is not to be wondered at, because there generally the hard-laboring husband eats the flesh, while all that is left for the wife and children is the gravy yielded by the fat, to season their bread and vegetables. Hence it is that there nothing but fat meat will sell in the market.—*The Plow, Loom, &c.*

Domestic Economy.

TO REMOVE MARKS FROM A TABLE. If a whitish mark is left on a table, by carelessly setting on a pitcher of boiling water, or a hot dish, pour some lamp oil on the spot, and rub it hard with a soft cloth. Then pour on a little spirits of wine or Cologne water, and rub it dry with another cloth. The white mark will thus disappear and the table look as well as ever.

WASHING CLOTHES. Mrs. Swisshelm gives the following directions how to wash clothes much soiled by field or out-door work, especially when they are much saturated with perspiration:

"If you would take a pound of washing soda, half a tea-cup full of spirits of wine, with a quart of water and a gallon of soft soap or two pounds of hard soap—put them on the fire and boil a few minutes, then put the mixture away for use; and the evening before wash day, put your white clothes into cold water, with enough of this mixture to make suds, and let them stand all night, you will find your clothes very easy to wash. A little of this stuff thrown into the boil, makes them white and clear, and if you rinse them well, does not injure the clothes."

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,
and sent to subscribers on the following

TERMS:

For a single copy, - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " " " - -	3 00
16 " " " " " " - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

SCHOOL JOURNAL

AND VERMONT AGRICULTURIST.

Vol. III.

WINDSOR, VT., JANUARY, 1850.

No. 9.

THE SCHOOL JOURNAL.

For the School Journal.

New-Year's Greeting to School Children, for 1850.

"Again the silent wheels of time
Their annual round have driven."

MY YOUNG FRIENDS: I wish to greet you all, today, A HAPPY NEW YEAR. I cannot see your cheerful faces in the school-room, but I send you here, all that come to school, small and large, boys and girls, A HAPPY NEW YEAR. I wish your teachers, also, and your parents, A HAPPY NEW YEAR. And will you not, children, do all you can to make each other happy, to make your parents and your teachers happy, this year? May you all learn to spell well, to read well, to write well, to cipher well, and to BEHAVE well, in your schools this winter.

If you would be happy, Young Friends, you must improve your minds and gain knowledge at school. This is the object of the school, to improve your minds so as to make you all useful and happy. You were made to learn, and the children that study and learn will be happy. Knowledge is the food of the mind, and there is more pleasure in obtaining knowledge than in eating any food. The pleasures of eating and drinking you have in common with the brutes, but the pleasures of knowledge the brutes cannot enjoy. Have you not all seen how delighted children are in learning new things, and getting new ideas? And do you not think the children of the slaves would be more happy, if they could attend school and learn to read and write, as you do? The more you learn, the more happiness you will find in writing and reading letters, in conversing with friends, in reading newspapers and books. Knowledge will make you more happy at your work, and more happy at your play. If you are ignorant, you must go through the world blind-folded, knowing little more of what you see than cattle and sheep. Knowledge will open your eyes so you can see new beauty and new truth everywhere. It will fit you to read and enjoy what astronomers, chemists, philosophers, poets and historians have to say. It will delight you in the house, and talk with you by the way. Whether you are rich or poor, sick or well, knowledge will be a most cheerful companion, teaching you, wherever you go, whatever you do,

"To find tongues in trees, books in the running brooks,
Sermons in stones, and good in every thing."

I wish you all, my young friends, the happiness of knowledge. But if you have the happiness of knowledge, you must study and learn. You can no more get knowledge without study than farmers can raise grain without work. Books will not give you knowledge. Your teachers cannot give you knowledge. You must, each of you, go and pluck the fruit of knowledge with your own hand, and then you will get it, and it will be worth eating, making you strong, cheerful and happy. The tree of knowledge may be near you, but if you are idle and lazy you will get none of its fruit.

There is no railroad up the Hill of Science. Your teachers cannot carry you up this hill. Some of the logs and stones have been cleared out of the road, some of the ditches and swamps filled up, so that it is much easier for you to get up the hill, than it was for your fathers. Still, there is no way for you, scholars, to get up the Hill of Science, but to climb up with your own feet. If you get lost, your teachers may shew you the way. If you fall down or stumble, they may help you up. If you get discouraged, they may cheer you on, pointing out to you the sweet flowers and rich fruits that grow by the way. But if you would get the fruits of knowledge, you must all study; you must climb the hill. Climb, climb, climb, and you will see the flowers and eat the fruits of knowledge, as Franklin did, and as all good scholars do. Climb, climb, climb, and you will find a Happy New Year in ascending the Hill of Science. The flowers will bloom for you, the birds will sing for you, if you will only climb.

The reason many of you do not learn, or climb the hill, any faster is, not because you cannot climb, but because you are too idle and too lazy to climb. You do not begin to climb by nine o'clock. You loiter about and stop to play. You stay away from school, and lose the road, and lose your company. Many scholars climb the hill rapidly for a few days, and then give up. Perhaps they linger in the Bowers of Pleasure, to attend a few balls and parties, thinking to stop only a little while, and then to climb again. Many of these, however, never try to climb any more, but go by an easy way to the Valley of Ignorance, and there spend the rest of their days. Those who leave the Bowers of Pleasure, and try to climb the hill again, seem to lose their strength and their disposition for climbing. Their feet become entan-

gled in the brush; they stumble over every stone, and are easily discouraged. Their conversation, too, is all about the pleasures they found in the Bowers of Ease, and not upon the pleasures of the Hill of Science. If they remain in the road, trying to climb, through the winter, they make little progress up the hill, for their eyes and their hearts are all the time upon the Bowers of Pleasure below. My young friends, I wish you all success, this winter, in climbing the Hill of Science. May you all find the pleasures of knowledge in climbing the hill, and it will be to you all a Happy New Year.

But knowledge alone will not make you happy. If you would be happy, you *must* do right. No matter how much bad men know, they will be unhappy,—so will bad boys. You all have a conscience which tells what is right, making you happy when you do right, and unhappy when you do wrong. You can no more do wrong and be happy than you can "take coals of fire in your bosom and not be burned." Daniel was happy in "the den of lions," because he did right. The king of Babylon was unhappy in a palace, "and his sleep departed from him," because he did wrong. If you are selfish and unkind you cannot be happy. If you are disobedient to your parents or your teacher, you cannot be happy. If you are idle and lazy; if you are fretful and discontented; if you get angry and quarrel, you cannot be happy.

There are two paths, children, in which you may walk,—the path of virtue, or the path of vice. The path of virtue will lead you to happiness, the path of vice to misery. Vice has a very smooth tongue, and will promise to make you happy in eating forbidden fruit, as she did Eve, but she will make you miserable, as she did Eve. She will promise you riches and honor, but she will give you poverty and shame, as she does the drunkard. She will strew her path, that leads to death, with flowers. She will sing you sweet songs, that she may deceive you, and rob you of your money and your character. She will whisper in your ears how much happiness you can find in disobedience,—in breaking the Sabbath, in lying, swearing, cheating, stealing,—but if you follow her, the happiness you find will soon turn to misery. Some of you she will send to the state's prison, some of you to the gallows, and all of you to shame.

Virtue promises you happiness, and she will make all happy; not with the deceitful happiness of vice, which ends in misery, but with happiness that will increase as long as you live. "Her ways are ways of pleasantness and all her paths are peace." "She is a tree of life to all that lay hold on her, and happy is every one that retaineth her." May you all find this year the happiness of virtue.

And now, once more, I greet you all, teachers and scholars, A HAPPY NEW YEAR. A HAPPY NEW YEAR to you, and A HAPPY NEW YEAR to your parents. Long may you live to greet each other,—A HAPPY NEW YEAR. May you all *so live* as to find, each year, more of the happiness of knowledge and virtue, and then each year will be to you A HAPPY NEW YEAR.

JAMES TUFTS,

Sup't of Com. Schools for Windham Co.

N. B. Teachers in Windham County are requested to read this Greeting in their schools.

For the School Journal.

Teachers' Institutes.

MISSRS. EDITORS: Your remarks in the last Journal on the new law relating to Common Schools, and particularly what you say upon Teachers' Institutes, brought to my mind a half-formed purpose, heretofore entertained, to communicate some facts in my short experience. Undoubtedly the subject of Teachers' Institutes is not thoroughly understood in any portion of the State; in some places it must be quite new.

What I have to say will be principally confined to a catalogue of the exercises which have been had at Derby Academy, and repeated once or twice at Brownington and Craftsbury, with some abridgments. If I can furnish no example worthy of imitation, I may happily set up a few beacons to guide others from the path of error.

These exercises have generally been continued eight days, including two occupied mainly in the semi-annual examination of teachers. This is not enough. Two full weeks would be hardly sufficient carefully to review the acquisitions of most teachers. If anything new is to be learned, still further time becomes indispensable. The first Institute held here was at the close of the Spring Term, 1847. They have been continued, Spring and Fall Terms, ever since, and all attended by me, with a single exception. The number of the class has been from fifty to seventy, and the number examined from forty-five to sixty. Latterly, I have lectured several times before the teachers' class previous to the ordinary Institute exercises.

The following is a brief statement of that of last fall, extracted from the programme announced from day to day. Devotional exercises were closed at 9, A. M., and each half day was occupied by two exercises of one hour and twenty minutes each, with a recess between of twenty minutes. Mid-day recess one hour. In the evening, lectures were given and discussions had, principally by members of the class.

Sept. 12. Lecture, on the responsibilities of common school teachers.

Sept. 19. On Attention.

Sept. 26. Subject continued.

Oct. 3. Orthography.

Oct. 10. Same, and Orthoepey.

Oct. 17. Articulation.

Oct. 24. Same, and Emphasis.

Oct. 31. Inflections and Modulation.

Nov. 7. Extemporaneous Composition, by the whole class at the same time, and Spelling by writing by Mr. Camp.

Nov. 12, A. M. Introduction and regulations, C., and Oral Arithmetic by Mr. Norcross. Sanders' Notation of Sounds, C. P. M., Written Arithmetic, by Mr. Graham. Orthography, C.

Nov. 13, A. M. Etymology, N. Geography, C. P. M. Reading, C. Spelling by letters and by sounds, or phonically, C.

Nov. 14, A.M. Geography, by Mr. Morse. Extemporaneous Compositions, read and criticised, C. P.M. Syntax and Analysis, N. Language, a lecture, C.

Nov. 15, A.M. Oral Arithmetic, N. Phonology and Phonetics, C. P. M. Spelling, G. Reading, a lecture, G.

Nov. 16, A.M. Common School operations, a lecture, C. Written Arithmetic, G. P.M. Government in Common Schools, a lecture, N. Geography of Vermont, C.

Nov. 17, A. M. Oral Arithmetic, N. Geography, G.

Nov. 19, A. M. Written Arithmetic, G. Parsing, Analysis of words and of sentences, C. P. M. Exercise in Reading, C. Examination the remainder of the day and the next, by County Superintendent.

During the evenings, the following lectures were given: On the Qualifications of Teachers, C. On Astronomy, N. On Arithmetic, G. and M. The Black-Board, Normal Chart, Outline Maps, Cornell's Common School Globe, the larger Globes, Magic Lanterns and other apparatus, were used for illustration and demonstration.

The following subjects were discussed by various members of the class: "The proper manner of commencing school." "Classification." "Systematic arrangement of school exercises." "The proper time for the exercise of writing." "Interruptions during recitations, by scholars out of the reciting class." "Recesses. When, how often and how long? For large scholars! For small ones!" "Should teachers direct as to the studies of scholars, or obey the directions of others!" "Has the teacher jurisdiction over the conduct of his pupils while on their way to and from school?" "Should whispering be allowed in school, and to what extent?" "Ought 'spelling-schools' to be discontinued?"

During the operations of the Institute, a variety of written questions were propounded for written answers, some to be deliberative, and some extemporaneous. Specimens of composition, too, were exacted and read and criticised in the presence of the class, the authors' names being withheld.

A good degree of interest has always been exhibited by the classes, and though I am aware our instructions have been quite imperfect; yet the standard of qualification and wages of teachers have been palpably advanced among us, and many schools have already received an impetus which promises much for the interests of popular education.

Dec. 25, 1849.

D. M. CAMP.

Rules for the Regulation of Common Schools in Derry, N. H.

DISTRICTS.

1. Each District should provide a well-finished and well-ventilated School-House, with ample room and convenient seats,—should furnish it with a Black-Board, and take efficient measures to prevent them from being injured.

2. Each member of the District should feel an individual responsibility in the welfare of the school;

and should act in all cases for the general good, rather than for his private interests.

3. In the appointment of the Prudential Committee, each member should feel sacredly bound to take a part, and endeavor to elect, unbiased by personal or party feeling, the person best qualified for the office.

PRUDENTIAL COMMITTEE.

1. The Prudential Committee should see that the School House be kept in good repair, and that suitable wood be seasonably furnished.

2. In selecting a Teacher, he should inquire carefully into his character previous to an engagement; and reject any applicant whose success may be regarded as doubtful.

3. He should see that a certificate of the Teacher's approbation, as required by law, be seasonably forwarded to the Selectmen.

SCHOLARS.

1. The Scholars should be regular in their daily attendance; punctual in the morning, thorough and diligent in their studies.

2. They should respect and be courteous to the Teacher, confide in his counsels, avoid improper reflections upon his character; and not only obey his laws themselves, but should sustain his government in relation to others.

TEACHERS.

1. Teachers should obtain their certificates from the Superintending Committee, before commencing school; and they should devote themselves entirely to the interests of their scholars,—they should study their disposition and capacities that they may use appropriate appliances and stimulate them to exertion, by every laudable motive.

2. They should, in their government, be mild, yet decided; affable, yet dignified; kind, yet enforcing their laws, if need be, by correction.

3. They should aim at the moral and social as well as the intellectual cultivation of their pupils, and both by example and precept should teach good manners, courteous deportment, with proper respect for age and station.

4. They should utterly prohibit among their scholars the use of profane or obscene language, and indecent behavior, both in and about the School House.

5. They should, by frequent visits, endeavor to become acquainted with the Parents, and thus enlist their sympathies and interest in their behalf.

PARENTS.

1. Parents should require their children to be punctual and regular in their attendance at school, and should furnish them with such books as are recommended by the Superintending Committee.

2. They should occasionally visit the school; make themselves acquainted with the Teacher, and co-operate with him in maintaining order and discipline.

3. They should studiously avoid any course that will tend to create a division in the District.

4. In case the Teacher is charged with incapacity or mismanagement, they should not attempt his removal by agitating the District; but should lay the subject before the Superintending Committee.

School Convention at Norwich.

In accordance with a previous notice, a large number of the friends of Common Schools assembled in Convention at Norwich, on the 13th instant, and organized at 11 o'clock, A. M., by the choice of Col. WILLIAM BARRON, President, Col. A. STIMSON, Vice President, and Gen. W. E. LEWIS and Dr. S. CONVERSE, Secretaries.

On motion, a committee of three was raised to prepare and report resolutions, consisting of Rev. J. Dudley, Dea. S. Tracy, and Rev. J. Merrill.

After singing by the choir, and prayer by Rev. Mr. Merrill, Mr. R. S. Howard, Superintendent of Schools for Orange County, was called upon, and responded in a very interesting and instructive address,—when, on motion, the convention adjourned until 2 o'clock, afternoon.

Two o'clock, P. M. The Convention was called to order, and the choir sung a Common School Ode, with fine effect. The Convention then listened to a very appropriate and interesting address to the Scholars present, by Rev. Mr. Merrill,—after which the committee on resolutions, through their chairman, reported the following:—

1. *Resolved*, That a judicious system of common schools, wisely and efficiently carried out, is the main hope of our Republic.

2. *Resolved*, That it is the duty and interest of every citizen to coöperate, heartily, in the efforts now being made to elevate our common schools.

After an interesting discussion, in which Rev. Dr. Richards and Professors Haddock and Brown of Dartmouth College, took part, these resolutions were unanimously adopted.

The convention then adjourned to 6 o'clock in the evening, at which time a large number assembled, to hear a Lecture from Mr. Joshua Bates, Jr., Principal of the Brimmer School, Boston, Mass., in which he clearly and forcibly pointed out the true "Requisites for Success in Teaching."

Mr. Dudley, chairman of the committee on resolutions, reported the following, which were unanimously adopted.

3. *Resolved*, That inasmuch as the responsibilities of Town Superintendents are, by the new law, very much increased, we respectfully but earnestly call the attention of the towns to the importance of the most judicious action in the choice of men to fill that office.

4. *Resolved*, That this Convention view with extreme gratification the interest which our Colleges and Academies feel in the promotion of our Common Schools.

5. *Resolved*, That the thanks of this Convention be tendered to the Editors of this County, for the interest which they manifest in our Common Schools; and that we pledge our contributions to their columns, which they so generously open for the advocacy of general education.

6. *Resolved*, That this Convention tender their thanks to the Choir, for the interest which they have added to this meeting; and also to Mr. R. S. Howard and Mr. Joshua Bates, Jr., for their very able and useful addresses; and also to the people of this vil-

lage, for the hospitality with which they have received us.

On motion, *Voted*, That the proceedings of this Convention be signed by the officers, and published in the Vermont Chronicle, and that all other papers in the County be requested to copy the same.

On motion, *Voted* to adjourn without day.

WM. BARRON, President.

W. E. LEWIS, } Secretaries.
S. CONVERSE, }

ADDRESS OF MR. HOWARD.

Mr. Howard being called by the Chair, arose and addressed the Convention in his usual earnestness and forcible style. He proposed to consider some of the means of improving our Common Schools.

1. *We must have faith.* Faith in what? That something can be done. There is a great deal of unbelief in regard to our Common Schools. I have sometimes thought that this faithlessness ought to make us ashamed. There are men in fine salary, and many of the demagogues in our villages, who croak about all this stir and expense in reference to schools.

Many of our good men speak discouragingly. But other States have succeeded, and why not Vermont? *Tax.* That little word has done wonders. Mr. Howard referred to the go-ahead spirit of Vermonters, and said, cannot the spirit which has sent the iron horse through this State, and made him leap the Green Mountains, improve our schools? Bonaparte said that "impossible was not good French." This little word, "I'll tax, sir," can do anything.

2. *Make them what they purport to be—Common.* I do not mean *ordinary*, *inferior*, but common for all, where the rich and poor shall all be taught. Most of our district schools are not common in this sense.—The rich and respectable, in most of our villages, do not send their children, and our district schools are not common, but schools for the poor.

Mr. H. dwelt much and eloquently upon the duty of the rich and influential to send their children to the district school, and thus elevate them. He alluded to his experience on this point in Newburyport, Mass. We are told—"make them what they ought to be, and then we will send our children." How shall we do this without their support? This is demanding of us "the tale of brick" without the straw. Is it not folly to expect an elevation of our common schools, while the rich and influential send their children away! If they are not safe for the children of the rich, are they safe for the children of the poor? Is not the mind of the poor as valuable as that of the rich? Is the price of mind to be measured by the circumstances of life? Your schools can be made just what you wish. Mr. H. referred, as proof of this, to the experiment in Massachusetts. He had seen the children of the rich and poor in the same school, receiving the same instruction, and making the same improvement. Daniel Webster said, in reference to these schools—"Had I as many sons as old Priam," and you know he had fifty, said Mr. H., "I would send them to the common school." If, then, you would make your schools what they ought to be, make them common.

3. If we would improve our common schools, we must take an interest in them.

Everything in which we would engage, must have our affection. Everything which we would value must have its price. Now, if you would elevate your schools, you must pay the price. Mr. H. related an anecdote of an old gentleman, wishing to be economical in the purchase of a Bible, and so he called for a *small Bible*, with *very large print*. So many want good schools, but are unwilling to give the price of a good school in money and attention. You may ask how your interest shall be awakened? *You must think*. That is the law of feeling. Think of the value of an education. Educate your sons, if you would have them useful. *You must read*. Here Mr. H. spoke in the highest terms of the *School Journal*, and wished it might be put into the hands of every citizen.

You must talk about your schools with one another—with your children. *Act*. Just go to work. God never meant that we should receive the reward of labor without the toil.

To know the value of a dollar, we must earn it. I have often thought that the poor love their children most, because they labor so hard to provide for them. Mr. H. was pathetic in this illustration.

Attend the school meeting. See that you have good men for your committees. Mr. H. referred to the new powers conferred on the Town Superintendents. That office should be regarded as the most important one of the town. In Newburyport there was more interest felt in the choice of school committees, than in any other office in the city. Notice of the hour for the choice was sent to every family, that every man might be present. The closest political contests have not the importance and interest of this question.

4. Mr. H. spoke with much feeling of the *importance of improving the School Houses*. He said, 'twas enough to make an angel weep, (if an angel could weep) to see our youth crowded into houses where the mind is crushed. The appeal of the speaker to parents and guardians, to see to this subject, was impressive, and cannot soon be forgotten. He congratulated the people in view of the rapid improvement of school houses. He insisted upon a free ventilation. He thought much of a tasteful location. He used to endeavor to have his school feel that the school house was the dearest place on earth.

See to it that you get good teachers. A poor teacher is the poorest thing in the world. There are a great many poor things; but the poorest of all things, is a *poor teacher*. I had rather a quack be employed in my sick room than in the school room, where the intellect of my child shall be spoiled.

Mr. H. spoke at some length of the importance of a plenty of black-board. One great advantage of a black-board was, that it taught the student to *think on his feet*. Some men know enough, but they have never learned to express what they know. One of the most important parts of an education, is learning to express thoughts.

5. If you would improve your schools, send your children to school *punctually*. Going to school only

a part of the time, is equivalent to going none at all. Children should be taught that it is 9 o'clock when the long pointer is at the figure 12. But many are taught to think that it is *nine till ten*. Habit is a part of education. A person who begins with being always behind the time, will go through life behind the time; his business done a little too late; debts paid a little too late; every thing goes so. There are some who seem to be born a little too late. *Washington was a minute man*. Habit clings to a man *like death to a dead man*.

6. Mr. H. insisted upon a *uniformity of school books*, in connection with the improvement of our schools. The want of this is an immense evil, which in some way must be remedied. In some schools in my County, there are *not three books alike*. In one he found 25 scholars, and 26 classes. There is going on a continual change. Some hope from the new law. Let the Town Superintendents get together, as soon as possible, fix on the books, and then let the decision be like the laws of the Medes and Persians. After all, there is not much difference in the books. There are some six or eight different systems of Geography, and the difference between them amounts to just the difference " 'twixt tweedle-dum and tweedle-dee."

7. *If you want good schools, visit them*. Mr. H. referred to the custom of enjoining secrecy upon all that is done in school. He would rather have the walls of our school houses *transparent*, so that the people could see what is going on there. The eye of the public should be on the schools all the time; and a good teacher will work the better for it. Look into your schools often. Will you suffer these men to have the moulding of the character and the guiding the intellect of your children, and not ever take the trouble to see how they are doing it?

8th. *A good teacher* is the sine qua non to a good school. Everything else may be right; but all is nothing, if the good teacher is not present. Some teachers are cheaper at 25 dollars per month, than others, who will work for nothing and find themselves. He described a good teacher. A young man came to him for license to teach a difficult school. He told him he would license him, if he would promise him *that he would succeed or die*. He did succeed. He told of another that if he would spell that short word "try," he would recommend him. "I will try, sir." He too succeeded. We want men who will earn more than they get. Let the teacher be determined to do this, and you will be worth employing. The money which you do not earn, is better for you, than that which you do earn. *You earn a reputation* which is far better than money to any man. Look for such persons to teach your schools.

Lastly. *You must rely mainly on yourselves*. This includes all I have said. If you want a thing done *well*, do it *yourself*. You must not depend on your County Superintendent, or your Town Superintendents. The new law does not design to take the work out of your hands. If it did, it would not be worth the paper on which it is printed. There are 100,000 children in this State to be educated, and is not this

the great interest! *Children to-day, men to-morrow.* Quick as thought things move now. You must not loiter, you can make them what they ought to be: men whose eloquence may sway the multitude, just as the storm sweeps the forest. You may, in your school, be training those who shall minister at the altar of our holy faith; those whose voice shall be heard in the hall of your State, and the councils of your nation. Give your children a *thorough education and little money.* He spoke of a man now worth a half million, who said to him, "My father, when I was young, gave me a dollar, and much good advice. I determined to keep the dollar and follow the advice, and I have the dollar now." The speaker closed with an eloquent appeal to parents. *These school days are on the wing.* "Passing away" is written on all things below. Educate your children and they will not disappoint you. In future life their hearts will return to your life, when you are in your graves, and bless your memory.

This address of an hour or more in length, was listened to with unabating interest.

Notes of Schools.

No. 66. Fifty scholars in a small room; air fetid; seats narrow and high; desks about 8 inches wide; small space near the stove for classes to recite. An experienced teacher, works hard and fast, speaks quick, turns off classes rapidly, and preserves good order, considering what an uncomfortable house the children are in. Some rudeness and vulgarity discoverable among the boys. At least one-fourth of the school money wasted for want of a suitable school-room.

No. 67. A small, backward school. Teacher cannot persuade scholars to use the black-board, as their parents say the black-board is no use, and they will not allow their children to work on it. I asked one of the neighbors why their school was so backward, seeing they had had the usual amount of schooling. "Well," said he, "to tell the truth, we have had rather poor teachers. The committee have wished to hire cheap teachers, and have usually taken beginners, and only now and then one has been good for any thing." This winter they have a good teacher, but he feels that his hands are tied by the ignorance and prejudices of the parents. Thinks he could manage the children well enough if the parents did not interfere. Profane swearing common among parents and children; but the reading of the bible not tolerated in school.

No. 68. A large school, mostly ambitious to learn; a few very good scholars. Parents take great interest in the school, to furnish children with books, and see that they learn. A well qualified, sprightly, communicative teacher, talks rather too much, and allows whispering, laughing, loud study, and sometimes loud talk, in school. An individual in the district told me the schools for several winters had not been worth much, on account of balls and parties, in which the older scholars were engaged.

No. 69. An old-fashioned school-house, small, shabby, and very inconvenient; good dry wood under

cover. About 30 scholars, naturally very bright.—Have not seen a more wide-awake, sharp, promising set of young boys in any school, though not very forward, as they have not had very good schools.—School last summer good for nothing, for want of order. An experienced, energetic teacher; says he can't persuade parents to visit the school. Scholars all speak up loud, and take places in spelling, the head one wearing a piece of money; have not seen so much interest in spelling in any school this winter. This district is retired, back on a hill; but the people quite intelligent. They keep up a weekly Lyceum.

No. 70. An old school-house repaired, but the school-room so small; would be of good size if including the part now used for a wood-house. Teacher, a young female, of good manners and considerable character; has a natural tact for teaching, keeps good order, asks a variety of questions, is from a town where they have good schools; and a teacher from such a place is as much better fitted for teaching as a boy that has been brought up with a good farmer is better fitted for working on a farm. Parents not accustomed to visit the school; committee had been asked to come in, but did not know whether they should or not.

No. 71. A tolerable, second-rate teacher, of the old style. Reading, low, dull, monotonous; scholars try twice in spelling, and go over considerable ground in all their studies, but are not drilled in first principles. No general exercises in school; small children just read and spell and then sit still, as though there was nothing more they could do. Black-board not used. Teacher and scholars need waking up, and so do the parents.

No. 72. A small school-room and school; floor swept, bonnets and shawls hung up; an excellent, large, air-tight stove; fire shovel hung on a nail; a new broom in the corner. An experienced, skillful, female teacher, quite at home in her school; trains the classes in Arithmetic thoroughly on the black-board. If the district had formerly employed such a teacher, the school would have been more forward than it is. When one teacher gets the scholars awake and leads them up the "hill of science" a long way, then the district must try a new teacher, who will, perhaps, keep them in the same place, or move them round in a circle, if she does not lead them *down the hill*; and this is one great reason so many bright children in our district schools remain *stationary*.

No. 73. Primary school, in village of B——. Fifty-five scholars; cheerful, happy, orderly, staid. Some uneasiness, but no disobedience or disorder; and when the teacher speaks, all attend, and obey, *promptly*. Large classes take their places still; when they sit on recitation benches, the one that answers a question rises from the seat; which looks well and makes no trouble,—they do it so quick.—Scholars interested in Geography, and recited very well in concert, bounding the States in concert without looking on the map, which is an excellent thing for all schools. Teachers should see that their scholars can bound every State without a map. A prompt, energetic, ambitious, experienced teacher. Children

full of zeal and spirit, appeared to love their teacher and school, to take pride in behaving well and pleasing their teacher; were very happy in singing exercises. A large number of them have not been absent a single day during the term.

No. 74. Another Primary school of sixty-nine scholars. Teacher at home in the school; keeps good order without any fuss; has the small children spell their words over, and spell them in concert, till they learn to spell them readily; which is a good practice. Class in Colburn's Arithmetic large and interesting; were required (as scholars should be) to recite without the book, repeating the example after the teacher, and then giving the solution. School quite still, though it was not the stillness of dullness, or terror, but order, interest and propriety. During the eight weeks school has kept, 15 or 20 have not been absent or tardy once, and during the past week about 50 had not been absent or tardy once. Some complaint by the teacher that the parents did not visit the school. Both of these schools characterised by *order and life*,—the two most important points in a good school. One of the teachers remarked that she had good reason to believe several of her scholars had not whispered at all for many weeks. I saw no whispering or loud study, and yet the children seemed happy and contented; far more so than in schools of noise and confusion. In one school noticed, the scholars did not make their manners before reading and spelling.

No. 75. Visited the Intermediate and High school, with school committee. These schools now under good regimen, doing credit to the teachers and the village. The boys and girls appear attentive to their studies, interested in school, respectful to teachers and visitors. Attention is now paid to drawing in these schools, and the specimens of the pupils were neat, and well executed for beginners. In the Intermediate school, I noticed by the teacher's roll, that many of the scholars had not been absent or tardy for several weeks.

In many of our district schools, it would be an improvement: (1) If the small scholars had more general exercises, especially on the maps and black-board. (2) If the scholars should read over less ground, and be drilled more thoroughly on what they do read.—(3) If, in spelling, reading, and other exercises, the teacher should not always call on the class *in course*, but promiscuously, so as to secure the *attention of the whole class*. Want of attention is a great fault in most schools. (4) If the scholars that miss a word in spelling, should be required, as they are in some schools, to spell the word correctly, (without being called upon) when it has been spelled by another.—(5) If Committees and Parents would more frequently visit the school. Teachers invariably speak of the good influence of such visits on their schools.

JAMES TUFTS.

Wardeboro', December, 1849.

HOW MANY MILES A PRINTER'S HAND TRAVELS.

Although a printer may be setting all day, yet in his own way he is a great traveller, or at least his hand is, as we shall prove. A good printer will set 8,000

ems a day, or about 24,000 letters. The distance traveled over by his hand will average about one foot per letter, going to the boxes in which they are contained and of course returning, making two feet every letter he sets. This would make a distance each day of 48,000 feet, or a little more than 9 miles; and in the course of a year, leaving out Sundays, that member travels about 3000 miles!

Time by the Forelock.

Luther quaintly says, in his 'Table Talk,' 'Occasion has a forelock, but is bald behind. Our Lord has taught us this by the course of nature. A farmer must sow his barley and oats about Easter; if he defer it to Michaelmas, it were too late. There is my servant Wolf; when four or five birds fall upon the bird-net, he will not draw it, but says, 'O, I will stay until more come;' then they all fly away, and he gets none. Many a young fellow has a school stipend for six or seven years, during which he ought diligently to study; he has his tutors and other means; but he thinks, 'O, I have time enough yet.' But I say, No, fellow; what little Jack learns not, great John learns not. Occasion salutes thee, and reaches out her forelock to thee, saying,—Here I am, take hold of me; thou thinkest she will come again. Then says she,—Well, seeing thou wilt not take hold of my top, take hold of my tail; and therewith flings away.'

ANOTHER SELF-TAUGHT NATURALIST. The editor of the North Adams Transcript, in traveling recently through Hoosic, saw a neat little octagon building, two stories high, with a window in the roof forming an apex, and over the entrance was the inscription, 'Sacred to Science,' cut in a slab of marble. Tempted no less by the tasteful edifice than by the singular inscription, the editor availed himself of a polite invitation of its owner, Mr. LYMAN WILDER, to spend an hour within its walls. He found there, a rare collection of minerals, precious stones, and strange productions of nature, arranged with a taste and skill, worthy of the imitation of more extensive and costly cabinets.

But Mr. Wilder is as great a wonder as his cabinet: He is now fifty years of age. He began life without property, without education, and with the possession of scarcely the ordinary degree of bodily health.—Compelled by necessity to devote the hours of daylight to the usual vocations of life, he explored, while others played or slept, the secret chambers of nature, and gathered her wonders, to delight himself and to astonish and instruct others. But while he has brought together so fine a collection of God's handiwork, he has, also, through patient industry and economy, accumulated considerable property. And now, regardless of the allurements of wealth and the seductions of social intercourse, he nightly retires to his cabinet, and labors with the ardor of an enthusiast, to reveal the glories of nature.

Franklin says: "If a man empty his purse into his head, no man can take it away from him. An investment in knowledge always pays the best interest."

We append a song which was composed by Mr. N. A. Gray, and which is sung by his one hundred scholars with pleasing animation. We hope that parents will read it, and examine it, for we think that they will find much that will be profitable if attended to.

Oh Dear! What can the Matter be!

Oh dear, what can the matter be?

Dear, dear, what can the matter be?

Dear, dear, what can the matter be?

Parents don't visit the School!

They visit the drill to see murderer's sabres,
They visit the Circe, they visit their neighbors,
They visit their flocks, and the servant who labors,
Now why don't they visit the School?

Oh dear, &c.

They care for their horses, they care for their dollars,
They care for their lodges, and fancy fine collars.

But little, we think, do they care for their scholars,
Because they don't visit the School.

Oh dear, &c.

We know we from hunger and cold are protected,
In knowledge and virtue our minds are directed,
But still, we do think we are sadly neglected,
Because they don't visit the School.

Oh, dear, &c.

Now if they will come, they'll find all in their places,
With finely combed hair, with clean hands and clean faces,
All pleasant and happy, with nought that disgraces,

Now why don't they visit the School?

Oh dear, &c.

"Suiting the action to the words, all brush down their hair, and then twist their hands above their heads to show that they are clean.

Pittsburgh Teachers' Magazine.

MAXIMS OF BISHOP MIDDLETON. Persevere against discouragements—keep your temper—employ leisure in study and always have some work on hand—be punctual and methodical in business, and never procrastinate—never be in a hurry—preserve self-possession and be not talked into conviction—rise early and be an economist of the time—maintain dignity without the appearance of pride—manner is something with every body and every thing with some—be guarded in discourse, attentive and slow to speak—never acquiesce in immoral or pernicious opinions—be not forward to assign reasons to those who have no right to ask—think nothing in conduct unimportant and indifferent—rather set than follow example—practice strict temperance, and in all your transactions remember the final account.

Square Years.

A correspondent of the *Boston Daily Advertiser* says:—

"Looking over the problems in the *Farmers' Almanac*, in an idle moment, I read the following:

'The year 1840 was a square year. What was the last square year in the last century? What will be the next square year in the next century?'

Casting these mentally, I discovered a property which may amuse the curious. It is this: 1600 was a square year, being the square of 40. To this add

the square of the largest digit, 9, and you have the next square year, 1681, which is the square of 41. From 1681, the square years, as long as their roots do not exceed 50, may be found successively by increasing the hundreds figure by 1, and by filling the units and tens places successively by the squares of the digits in their inverted order, omitting 9, the square of which has already been used; that is, by filling the units and tens places successively with the squares of 8, 7, 6, 5, 4, 3, 2, 1, 0.

For the square years from 51 to 60, go on still by increasing the hundreds figure by 1, but fill the units and tens places with the squares of the digits up to 10, in their natural order, thus:—

1600 is the square of 40	2601 is the square of 51
1681 " " 41	2704 " " 52
1764 " " 42	2809 " " 53
1849 " " 43	2916 " " 54
1936 " " 44	3025 " " 55
2025 " " 45	3136 " " 56
2116 " " 46	3249 " " 57
2209 " " 47	3364 " " 58
2304 " " 48	3481 " " 59
2401 " " 49	3600 " " 60
2500 " " 50	

If any of your readers are curious to ascertain the law of the square years previous to 1600, (and beyond 3600,) they will find them to follow laws no less strict, but more curious, because more complicated, which I have not now time to write out."

Can any of our arithmetical readers "write out" for us, the "more curious" laws, alluded to but not stated in the last sentence!

For the School Journal.

Questions.

WILMINGTON, Dec., 15, 1849.

TO THE EDITORS:—Having lately investigated some philosophical principles, and thinking of the saying, "The more heads the more wit," I send you a proposition. If you deem it worthy a place in your excellent Journal, you will confer a favor by giving it to your readers. Yours, JIM.

1. If there was an aperture made through the earth, and a ball was dropped into this aperture, where would it go, and where would it come to rest?

2. If the earth was a hollow sphere, and a ball was dropped into it, where would the ball come to rest?

3. If the above sphere was of such dimensions that a ball could be placed in any part of it, where would the ball go, and where come to rest?

READING AND THINKING. Those who have read of everything, are thought to understand everything too; but it is not always so. Reading furnishes the mind only with materials of knowledge; it is thinking makes what we read ours. We are of the ruminating kind, and it is not enough to cram ourselves with a great load of collections; unless we chew them over again, they will not give us strength and nourishment.—*Locke.*

THE AGRICULTURIST.

Bureau of Agriculture.

The Report in favor of the establishment of a National Bureau of Agriculture, at Washington, adopted by our Legislature, is received with universal favor. It has been extensively published, especially in agricultural papers, with marked approbation. And the plan, as our readers must notice with pleasure, is now recommended by the highest authority,—in the President's Message, and in the Report of the Secretary of the Home Department. We trust that the present session of Congress will not pass away, without accomplishing so desirable an object, and placing at the head of the Bureau some gentleman, who, like the author of the Vermont Report, is more interested in agricultural pursuits than in the concerns political parties.

Windsor County Agricultural Society.

REPORT OF THE COMMITTEE ON FRUITS AND GARDEN VEGETABLES.

The Committee on Fruits and Garden Vegetables respectfully report that the cultivators of the county appear hardly to have done themselves justice in this exhibition.

There were entered for premium only four lots of apples, five of pears, one of peaches, one of quinces, two of plums, and two of grapes. Of watermelons, one grower sent a dozen, and another a single specimen. There were four lots of squashes and two of pumpkins. There were also a few other vegetables not embraced in the list of those for which premiums were offered, and not of such excellence as, in the opinion of the Committee, to deserve a gratuity.

Either because the Society's Premium List is deficient, or for want of a proper appreciation of the object among cultivators, we fail to collect any adequate exhibition of what is done among us in the improvement of our fruits and vegetables.

Of apples, your Committee found on exhibition two fine assortments. That of A. B. Tobey of Chester, embraced a larger variety of kinds of known excellence than any other, and the first premium of Two Dollars is accordingly awarded to him. The second premium of One Dollar is awarded to Ebenezer Briggs, of Pomfret, whose specimens gave evidence of excellent cultivation. In the assortments of both these gentlemen there were sundry specimens of winter apples, of fine appearance, not sufficiently known to the Committee to justify the expression of an opinion in regard to their merits. Some of them were sweet apples, not extensively known; and others, having originated among us, may probably deserve the attention of cultivators. Your Committee take the liberty to suggest that provision should be made for trying and reporting upon such fruits at the season of their ripening—say at the annual meeting.—And probably the offer of premiums for single kinds of autumn and winter fruit might bring to our tables numerous excellent specimens, for which the Pre-

mium List now offers no place, and which, therefore, the Society does not invite.

The first premium for the best and greatest variety of pears (Two Dollars) is awarded to Stephen Tryon, of Hartford, who exhibited Dearborn's Seedling, Van Ness, Tilden (so called in Hartford, a very handsome fruit, of good quality, but understood not to be a good bearer) and White Doyenne, or St. Michael. The second premium is awarded to A. P. Tobey of Chester for Bartlett and Cushing,—one dollar.

Lionel C. Udall of Pomfret exhibited five kinds of seedling pears, all of good appearance, and two of such a degree of excellence that your Committee feel themselves justified in awarding to him the discretionary premium to the amount of one dollar. Mr. Udall has other seedlings, which, with those exhibited, deserve further attention from the Society.

E. C. Tracy exhibited a kind of pears of superior excellence, for which the premium (one dollar) for the best new kind, is awarded.

Mr. Gibbs of Hartford exhibited several kinds of pears, not named or labelled; and Ira Hazen of Norwich, the Seckel pear.

Your Committee further award :—

For the best and greatest variety of plums the first premium of two dollars to Stephen Tryon of Hartford, and the second of one dollar to E. C. Tracy of Windsor.

For peaches (beautiful specimens of five fine kinds) to A. P. Tobey of Chester, a premium of two dollars.

For quinces (one kind) to A. P. Tobey of Chester a premium of two dollars.

Mr. Tobey puts his peach trees on sandy land—manures with one peck of ashes, mixed with loam and a few pounded bones—and when the snows come he treads them down about the trees to prevent their starting early in the spring. His quinces are put on moist ground, and treated like the peach, except that he adds to the manure one gill of salt to each tree. Both are in a location protected from the north-east wind.

For grapes, the first premium of two dollars to E. C. Tracy, and the second of one dollar to A. C. Jennings, both of Windsor. Some of Mr. Tracy's grapes were worthy of notice, as showing the effect of *ringing*. A ring of bark three-fourths of an inch long was taken from the vine below the growing clusters, when the berries were of about half their usual size. The result was, earlier ripening and a very great increase of size.

For the best six watermelons, to Barnabas Dean of Weathersfield, the first premium of one dollar.

For the best variety of squashes for table use, the first premium of one dollar to Thomas Lowater, and the second of fifty cents to W. N. Bull, both of Windsor.

The first premium for the largest squash (one dollar) to Edward Hall of Springfield (specimen weighing 107½ lbs.); the second (fifty cents) to Lucius Hazen of Hartford (specimen weighing 104 lbs.).

For the six largest pumpkins, the first premium of

one dollar to G. H. Shedd of West Windsor, and the second, fifty cents, to W. N. Bull of Windsor.

J. S. Lovering of Hartford exhibited sweet potatoes, raised by himself, which had the appearance of being well ripened and of good quality.*

Charles Tinkham of Hartford had upon the table eight kinds of grapes, for exhibition, but not within the rules, or intended for premium. Your Committee wish that more members of the Society would take the trouble to enrich its exhibitions in the same way.

A still larger assortment of grapes adorned the tables, from the vines of Col. Libbeus Chase of Cornish, N. H.—embracing several of his promising seedlings, the Fragrant Harrison, the White Isabella, Strawberry, the Raisin Seedling, the Nizola and a number of foreign kinds.

Abiel Spaulding of West Windsor showed five kinds of handsome apples,—grafted fruit, but not known to the Committee.

E. C. TRACY,
for the Committee.

* Mr. Lovering says of his sweet potato crop:—"A tuber was put into some earth in the latter part of winter, in a pot containing flowering plants, and allowed to grow till warm weather, when the top was divided and set in the garden. As the tops admit of almost infinite division, I have no doubt a bushel may be raised from one tuber in that way, with good management.

The Best American Grape.

It is gratifying to be assured that "the best American grape" is an *early* one,—earlier than the Isabella. So says the editor of the Horticulturist, whose account of it we copy, as follows:—

"THE DIANA GRAPE."

Every fruit-grower will be glad to hear that a new native grape has at last been proved, which is really superior to the Isabella and Catawba.

Such a grape, we are now prepared to say, is the Diana. It has fruited abundantly, for two years past, in the garden at Wodeneth, the residence of our neighbor, H. W. Sargent, Esq. We said nothing of its qualities last year, because we would not praise it as it deserves upon the experience of a single season; but, after tasting it again, repeatedly, this season, we do not hesitate to rank it as the best of American grapes.

Though yet almost entirely unknown in collections, the Diana was raised several years ago by Mrs. Diana Crehore, of Milton Hill, near Boston, and was very briefly described in our work on Fruits. As the climate of New England is not so favorable to the ripening of native grapes as that of the Middle States, it seems until lately to have attracted but little attention there. Some specimens, sent from Boston to the Congress of Fruit-growers in New York this autumn, were not sufficiently matured to show the fine flavor of the fruit, as ripened on the Hudson. We were glad, however, to learn from the remarks of Messrs. French and Walker that it is now considered the best native grape in Massachusetts.

The Diana is a seedling from the Catawba, and, in general appearance and character, resembles its parent. It is, however, an entirely distinct variety, of

a more delicate pale red color, with less pulp and more juice than the Catawba. The bunches are also distinct, being quite compact, while those of the Catawba are always loose. It is an abundant bearer, and in its growth is equally vigorous with its parent.

The Diana, when fully ripened, is a finer flavored grape than either the Isabella or Catawba. It most resembles the latter in flavor, but is more delicate, and has less the peculiar wild taste of the native grape.

Perhaps the greatest merit of this new variety is, however, *earliness*. It ripens on the Hudson a week or ten days earlier than the Isabella, and, of course, a fortnight or more before the Catawba. It is evident, therefore, that it will be a decided acquisition to all those parts of the northern States where the Isabella and Catawba will scarcely ripen. It will not, perhaps, ripen so far north as the Clinton grape (now so well known about Rochester), but it is much superior in flavor and beauty of appearance.

We believe a few plants of the Diana may be had in some of the nurseries about Boston; but it is as yet scarcely at all known to cultivators, and we would direct the attention of nurserymen to the advantage of propagating so fine a grape."

Have any of our readers tried the Clinton grape!

Benefit of Sub-Soil Plowing for Corn.

The first week in May, 1849, I planted a field with corn, the same having been planted the two preceding years with corn without manure. The land was partly a sandy and partly a gravelly loam, and very much impoverished. I plowed it but once, and harrowed it after having thrown over a thin coat of coarse barn yard manure.

The corn was planted in drills three feet apart. A succession of rains followed, in consequence of which one third or more failed of coming up; this I replanted the last week in May. It proved equally forward with the first planting, which is conclusive evidence to my mind that there is not that great advantage to be derived by early planting which is too often claimed, if the weather subsequently proves favorable. After the corn was four inches high, I ran a small plow as near to the rows as could be done without injury, turning the earth from the corn, it being planted in drills. This covered the weeds which were beginning to spring up, and was followed with a small sub-soil plow to the depth of a foot or more, loosening the dirt but not turning it out of the furrow. About a week after this, I took for each acre 800 lbs. compost made up of 300 lbs. Peruvian guano, 200 lbs. bone dust, and 400 lbs. pulverized charcoal. This I sprinkled on each side the row in the furrow, following with a cultivator, which levelled the dirt in the centre and covered the compost. After two weeks I ran a double furrow with the small plow (one of your double mould board plows would have saved half the labor,) throwing the dirt to the corn. At the same time two men passed through, uncovering and straightening up any plants which needed it, and throwing out the dirt six inches to one foot. Some days after this, the sub-soil plow was run in the last-

named furrow to as great a depth as possible, which was followed with the cultivator, leaving the ground nearly level and entirely free from weeds, except immediately round and between the stalks, which were cut up or pulled out by hand with very trifling labor. There was an extreme drouth from the last week in June till August, and while the corn of my neighbors was suffering exceedingly, mine was growing from 2 to 2½ inches per day, by measurement, and yielded 144½ bushels ears, sound corn, per acre. I ought to have said the corn was covered by running the cultivator over it.

SAMUEL ALLEN.

Morristown, N. J.

[*Am. Agriculturist.*]

Economical Mode of Feeding Stock.

Farmers who have but few animals, say two or three cows, a yoke of cattle, or a pair of horses, will find it greatly to their interest to cut their corn-stalks, straw, and even hay when it bears a high price.—When this is done, put the cut fodder into casks of suitable dimensions, take hot water, to prolong the heat, and salt it at the rate of two quarts to a barrel [of water]. All know that brine can be kept hotter longer than fresh water. Pour this on the cut fodder as fast as possible, in order to prevent the escape of heat, cover up the cask close with a blanket, or anything convenient which will keep in the steam, and let it stand half a day or longer, when it will be found tolerably well cooked. Now place it in troughs for the stock; and if you have a little meal or bran to sprinkle over it, your animals will relish the feed so much the better, and it will do them more good.—Corn-stalks, straw, and coarse hay, are worth twice as much far food when thus prepared, than if thrown out neither cut nor steamed. We have given the above from experience, having been in the habit of following the practice for years.

Farmers labor diligently during spring, summer, and autumn, to raise and harvest fodder, then allow a large portion to be wasted from sheer negligence.—Winter is their leisure time, and they should endeavor, at some extra pains, to economize the food they have worked so hard to procure. Machines for cutting stalks, straw, and hay, have been greatly improved and multiplied within a few years past, and can now be had at low prices. It is economical to possess them, and no farmer should be without at least one on his premises.—*Am. Agriculturist.*

FARMINGTON, Ct. Our grass lands lying in the vicinity of our main street, produce on the average four tons to the acre, both crops, (we always cut two crops per year,) one field that was actually weighed, produced over five tons to the acre, and there are others which will quite equal that. There were three acres of oats, averaged 86 bushels per acre, one acre of which being limed produced 92 bushels; of corn there have been several pieces measured, some of the results I will state. One single acre produced 136 bushels; one piece of three acres produced 116½ bushels per acre, weighing 60 lbs. per bushel. Another piece of six acres, one acre of which was measured, produced 102 bushels, a fair average of the

whole. In the same field were three acres of potatoes, which produced something over 600 bushels sound tubers. There were other fields in corn which were estimated to produce more than the last named, but not measured.—*Am. Agriculturist.*

INFLUENCE OF MANURE. When I visited England, six years ago, the first thing that struck me was the beauty and fertility of the soil. Every farm appears a garden. In fact, England is a garden. Even the sides of the railroads, up to within a few feet of the iron track, are made to produce wheat, barley or potatoes. The beautiful lines of hedges, which so gladden the eye of an American, inclose no uncultivated lands. The very hill-tops are made fertile to their summits; the swamps are drained, ditched and blind-ditched, and every foot of earth that the labor and ingenuity of man can render cultivable is made to send forth its green stalks and golden harvests.

It is important that the American, and especially the New England farmer, should know *how* this is all done. I have dined and lived with English farmers; I have associated with them; I have frequently obtained their friendship, and sometimes their confidence; and, by hook and by crook, I have wormed this important secret out of them. I have obtained their philosopher's stone; I have got the clue to the ever-living fertility of their soil; and now, Connecticut farmers, in the fullness of my heart, which happens at this time to be overflowing with the "milk of human kindness," I will *freely*, without the hope of fee or reward, impart to you this grand secret. See that you improve by it. It all consists of one simple word—**MANURE.**—*Address of P. T. Barnum before the Fairfield (Ct.) Ag. Society.*

ANIMALS SHOULD BE ALWAYS KEPT IN A THRIVING CONDITION.—Do farmers ever reflect that all food and attention consumed by animals, without a corresponding improvement, is so much money thrown away? Every day in the life of a brute should be a day of progression towards maturity, either of working capacity or towards the shambles. Curtail your stock, sell, or even give them away, till you have reduced the number within your ability to *full-feeding*. A prime milking cow, amply fed, housed and cleanly kept, will produce as much milk through the season (winter and summer) as four or half a dozen, miserable brutes half fed; yet the last will consume two or three times the amount of food and attention appropriated by the other.—*Am. Agriculturist.*

AN EASY RULE FOR FARMERS. A "quarter of wheat" is an English measure of eight standard bushels; so if you see that quoted at fifty-six shillings, it is seven shillings a bushel. A shilling is twenty-four cents; multiply by seven, and you have \$1 68 per bushel.

TO GREEN-TEA DRINKERS. Most of the green teas consumed in England and the United States, are said to be colored by a preparation of indigo and plaster of Paris. To every 14½ lbs. of tea, one ounce of coloring matter is applied.

The Plow.

DR. HOLMES' REPORT ON THE BERKSHIRE PLOWING MATCH:

The Committee on the Ploughing Match are fully sensible of the dignity and importance of the office committed to their judgment. To decide upon the comparative merits of so many excellent specimens of agricultural art is a most delicate, responsible and honorable duty.

The plough is a very ancient implement. It is written in the English language p-l-o-u-g-h, and by the Association of Free and Independent Spellers p-l-o-w. It may be remarked that the same gentlemen can, by a similar process, turn their coughs into cows, which would be the cheapest mode of raising live stock, but it is to be feared that they (referring to the cows) would prove but low bred animals. Some have derived the English word plough from the Greek word *ploutos*—the wealth which comes from the former suggesting its relation to the latter. But such resemblances between different languages may be carried too far, as, for example, if a man should trace the name of the *Altamaha* to the circumstance that the first settlers were all *tomahawked* on the margin of that river.

Time and experience have sanctioned the custom of putting only plain, practical men upon this committee. Were it not so, the most awkward blunders would be constantly occurring. The inhabitants of our cities, for instance, who frequently visit the country during the fine season, would find themselves quite at a loss if an over-strained politeness should place them in this position. Imagine a trader or a professional man from the capital of the State unexpectedly called upon to act in rural matters.

Plough-shares are to him shares that pay no dividends. A coulter, he supposes, has something to do with a horse. His notions of stock were obtained in Faneuil Hall Market, where the cattle look funnily enough, to be sure, compared with the living originals. He knows, it is true, that there is a difference in cattle, and would tell you that he prefers the *air-loin* breed to all others. His children are equally unenlightened. They know no more of the poultry-yard than what they have learned by having the chicken-pox, and playing on a Turkey carpet. Their small amount of knowledge of wool-growing is *lam(b)entable*.

The history of one of these summer visitors shews that his rural education must be very imperfect. He no sooner establishes himself, than he commences a series of experiments. He tries to drain a marsh, but only succeeds in draining his own pockets. He offers to pay for having a compost heap carted off, but is informed that it consists of corn and potatoes in an unfinished state. He sows abundantly, but reaps little or nothing, except with the implement he uses in shaving, a process which is frequently performed for him by other people, though he pays no barber's bills. He builds a wire fence and paints it so that nobody can see it. But he forgets to order a pair of spectacles apiece for his cows, who, taking offence at something else, take his fence in addition,

and make an invisible one of it, sure enough, in no time. And finally, having bought a machine to chop fodder, which chops a good slice of his dividends, and two or three children's fingers, he concludes that instead of cutting feed he will cut farming, and so sells out to one of those plain practical farmers, such as you have honored by placing on your committee, whose pockets are not so full when he starts, but have fewer holes and not so many fingers in them.

Clear the brown path, to meet his coulter's gleam!
Lo! on he comes, behind his smoking team,
With toil's bright dew-drops on his sun-burnt brow,
The lord of earth, the hero of the plow!

First in the field before the reddening sun,
Last in the shadows when the day is done,
Line after line along the burning sod
Marks the broad acres where his feet have trod.
Still where he treads the stubborn clods divide;
The smooth, fresh furrow opens deep and wide;
Matted and dense, the tangled turf upheaves;
Mellow and dark, the ridgy cornfield cleaves.
Up the steep hill-side, where the laboring train
Slants the long track that scores the level plain;
Through the moist valley, clogged with oozing clay,
The patient convoy breaks its destined way.
At every turn the loosening chains resound;
The swinging plowshare circles glistening round;
Till the wide field one billowy waste appears,
And wearied hands unbend the panting steers.

These are the hands whose sturdy labor brings
The peasant's food, the golden pomp of kings;
This is the page whose letters shall be seen,
Changed by the sun to words of living green;
This is the scholar whose immortal pen
Spells the first lesson hunger taught to men;
These are the lines, O Heaven-commanded toil,
That fill thy deed—the charter of the soil!
O gracious mother, whose benignant breast
Wakes us to life and lulls us all to rest,
How sweet thy features, kind to every clime,
Mock with their smile the wrinkled front of time!
We stain thy flowers—they blossom o'er the dead;
We rend thy bosom, and it gives us bread:
O'er the red field that trampling strife has torn,
Waves the green plumage of the tasseled corn:
Our maddening conflicts scar thy fairest plain;
Still thy soft answer is the growing grain.
Yet, O our mother! while uncounted charms
Round the fresh clasp of thine embracing arms,
Let not our virtues in thy love decay,
And thy fond weakness waste our strength away.

No! by these hills, whose banners, now displayed
In blazing cohorts, Autumn has arrayed;
By yon twin crest, amid the sinking sphere,
Lost to dissolve, and first to reappear;
By these fair plains the mountain circle screens,
And feeds in silence from its dark ravines;
True to their home, these faithful arms shall toil
To crown with peace their own untainted soil!
And true to God, to Freedom, to Mankind,
If her chained ban-dogs Faction shall unbend,
These stately forms that, bending even now,

Bowed their strong manhood to the humble plow;
 Shall rise erect, the guardians of the land,
 The same stout iron in the same right hand,
 Till Greylock thunders to the parting sun—
 The sword has rescued what the plowshare won.

High Farming.

This term has been generally adopted by European agricultural writers, to express such agricultural practices as embraced the liberal use of fertilizers to the full extent that experience has proved to be profitable, and the selecting of these fertilizers with a strict view to the requirements of the crop, and the deficiencies of the soil.

In addition to these facts, high farming may be said to include the proper mechanical preparation of the soil to enable it to avail of nature's laws to the fullest extent.

Thus, then, we have a clear definition of what is meant by high farming, and for the future we can use the term without a repetition of its meaning. We believe in high farming, and so far as our experience goes, we do not believe that farming otherwise pursued will remunerate the farmer with as fair a ratio of profit for the amount of capital invested and talent applied, as if used in the other vocations of life; and that nothing but the absence of risk, and want of knowledge among the operatives, could cause the continuance of so suicidal a method of procedure.

With high farming, we are equally certain that both capital and talent can be more profitably employed in the cultivation of the soil, than in any other way; and that the risks of loss or failure is much less than by the ordinary or guessing method.—*Working Farmer.*

Three Crops in a Season.

Two years since, we tried the following sub-succession, on land thoroughly sub-soiled and sub-drained, and six times surface-plowed before being planted. As early as practicable in spring, we planted early potatoes (mammoth nutmeg potatoes), and thirty days before the potatoes were ripe, we put out a cabbage plant between every four hills of potatoes, thus having the same number of cabbage plants as hills of potatoes. Thus the cabbage plants were put in the moist part of the soil and partially shaded by the potato tops. Cabbage plants root much more firmly by being slightly shaded during the early part of their growth, and when thus planted, as the potato vines die, the plants gradually receive the sun and become properly acclimated. The digging of the potatoes was cultivation to the cabbages, and after the removal of the potatoes, we planted double rows of white globe turnips in their place. The result was, that we obtained three hundred and eight and a half bushels of potatoes, over three thousand cabbages, and six hundred bushels of white globe turnips, from a single acre, being three crops in one season. There are many similar sub-successions, and those who pursue market gardening do so to profit only by averaging three crops or more per season.—In the above experiment we used eighty half cords

of manure per acre, and incorporated with it small quantities of all the inorganic materials which the plants required, and which were not in sufficient quantities in the soil, having previously made a careful analysis to ascertain its requirements. The expense of manure, labor, &c., will not exceed one hundred and fifty dollars per acre, while the results at ordinary prices will amount to five hundred and eighty dollars, leaving a net profit of over four hundred dollars.

On land similarly treated this year, we have raised twenty-four thousand late Bergen cabbages on two acres, which crop could not have been perfected with double the quantity of manure on unsub-soiled land. Our surface plow ran seventeen inches deep, while the sub-soil plow, running in the bottom of the surface furrow, disturbed the soil without raising it seventeen inches more. Last fall the two acres were ridged and back-furrowed, sub-soiling the furrows, and so left during winter for disintegration during frosts.—*Working Farmer.*

Horticulture.

A correspondent in the *Wool Grower*, over the signature of C. B. T., says:—

"We have heard of the profits of fruit culture; we read that Dubois' Early Golden Apricot yields from twenty-five to fifty dollars on a single tree; that Dennison, of Albany, grew plums at the rate of one thousand dollars per acre; that the peach orchards of the State of Delaware, and the pear gardens of the city of Boston, produce small fortunes for those who choose to devote that peculiar care and attention without which no business can be made profitable.

"I know of an orchard of two acres of apple tree, a class of fruit the least profitable to the grower, which gave a return of over six hundred dollars, and had they been 'Northern Spy,' would have netted over twelve hundred. This orchard paid to its owner this sum at one gathering, in less than five years after transplanting, the ground under the trees producing root crops in the mean time.

"Thrifty, close, and proper culture in everything, and on a five acre lot, one man would produce, by system and management, in fruit culture and root crops, two thousand five hundred dollars per year; where another, doing perhaps as well as he knew how, could but get five hundred dollars." The one would manage upon true principles, introducing as much 'book knowledge' as the publications of the day, carefully studied, would give him the ability to do; the other digs holes in an old worn-out meadow, puts his trees therein, starves the poor things to death, and then grumbles because 'it has rained too much,' or 'it has rained too little.'

"Farmers, as a class, have not in times past had respect enough for Agricultural Chemistry. Talk of 'special measures' to one of your old-fashioned fellows, of one hundred years ago—could he, like Rip Van Winkle, wake up and hold converse—tell him of the benefit of salt, of charcoal, or even lime, upon land, and he would feel profound pity for your mental aberration, and would say, 'Much learning

hath made thee mad, friend Peters.' The descendants of these old fellows are on the earth now.

"But what has produced this change in Horticulture in particular? The devotion to it of men of education, and those men are now giving Agriculture an impetus it has never had before. Both have become a science, and the introduction of Agricultural Chemistry has produced wonderful results. Profits have increased, and to the refined, educated mind, pleasure is derived from both of these pursuits, which no other profession in the wide world can give.—There seems to be connected with this business a charm not found in any other calling. You seem to hold a partnership with the God of nature—you plant the seed, He causes it to grow. Without rain, without the action of the atmosphere, without the constant operation of His laws, your crops cannot be matured; and after an abundant harvest, no properly constituted mind can fail to render gratitude for His bounty."

Grand Banquet to the Potato.

That highly respected vegetable, the Potato, being now, it is hoped thoroughly re-established in health, it was determined by a few leading members of the Vegetable Kingdom to offer a banquet to the worthy and convalescent root on his happy recovery. The arrangements for the dinner were on a scale of great liberality, and the guests included all the principal vegetables. The invitations had been carried out by an efficient corps of Scarlet Runners, and the Union occupied the chair. He was supported on his right by the head of the Asparagus family, while Salad occupied a bowl at the other end of the table, and was dressed in his usual manner. The Potato, though just out of his bed, was looking remarkably well, and wore his jacket, there being nothing to mark his recent illness, except perhaps a little apparent blackness round one of his eyes. After the cloth had been removed,

The Onion got up to propose as a toast, "the Potato, their much respected guest." (Immense cheering.) He, the Onion, had known the Potato from infancy; and, though they had not always been associated in life, they had frequently met at the same table. They had sometimes braved together the same broils, and had found themselves often together in such a stew (he alluded to the Irish stew) as had brought them, for the time being, into an alliance of the very closest kind. He, the Onion, was delighted to see the Potato once more restored to his place in society, for he, the Onion, could say, without flattery, that society had endeavored to supply the place of the Potato in vain. (Hear, hear.) They had heard of Rice having been suggested to take the place of his hon. friend, but the suggestion was really ridiculous. *Risum tenentis, amici*, was all that he, the Onion, had to say to that. (Loud laughter, in which all but the Melon joined.) He, the Onion, would not detain them longer, but would conclude by proposing health, long life and prosperity to the Potato.

The toast was received with enthusiasm by all but the cucumber; whose coolness seemed to excite much disgust among his brother vegetables. The

Onion had, in fact, affected many of those present to tears, and the Celery, who sat next to the Horseradish, hung down his head in an agony of sensibility. When the cheering had partially subsided, the Potato rose, but that was only a signal for renewed enthusiasm; and it was some minutes before silence was restored. At length the Potato proceeded nearly as follows:

"Friends and fellow vegetables,—It is with difficulty I express the feeling with which I have come here to day. Having suffered for the last three or four years from a grievous disease which seemed to threaten me with total dissolution, it is with intense satisfaction I find myself once more among you in the vigor of health. (Cheers.) I should be indeed insensible to kindness were I to forget the anxious inquiries that have been made as to the state of my health by those who have held me in esteem, and sometimes in a steam. (A laugh in which all but the Melon joined.) I cannot boast of a long line of ancestors. I did not, like some of you, come in with the Conqueror, but I came in the train of civilization, amidst the memorable luggage of Sir Walter Raleigh, in company with my right hon. friend the Tobacco, who is not now present, but who often helps the philosopher to take a bird's eye view of some of the finest subjects for reflection. (Immense cheering and a nod of assent from the Turnip Top.) Though I may be a foreigner, I may justly say that I have taken root in the soil, and though I may not have the grace of the cucumber, who seems to have come here in no enviable frame, (loud cheering) I believe I have done as much good as any living vegetable; for, though almost always at the rich man's table, I am seldom absent from the poor man's humble board.—(Tremendous applause.) But," continued the Potato, "let me not get flowery, or mealy-mouthed, for there is something objectionable in each extreme.—I have undergone many vicissitudes in the course of my existence. I have been served up, ay, and served out (a smile) in all sorts of ways. I have been roasted by some, I have been basted by others; and I have had my jacket rudely torn off my back by many who knew not the treatment I deserved. But this meeting, my friends, repays me for all. Excuse me if my eyes are watery. (Sensation.) I am not very thin skinned; but I feel deeply penetrated by your kindness this day."

The Potato resumed his seat amid the most tumultuous cheering, which lasted for a considerable time.—*Punch*.

SMALL POTATOES. Some years ago a gentleman visiting a farmer in Tolland, Connecticut, took from his pocket a small potato, which had somehow got in there at home. It was thrown out with a smile, and the farmer taking it in his hand to look at it, a curious little boy of twelve at his elbow asked what it was.

"O, nothing but a potato, my boy—take and plant it and you shall have all you can raise from it till you are free."

The lad took it, and the farmer thought no more about it at the time. The boy, however, not despising

ing small potatoes, carefully divided it into as many pieces as he could find eyes, and put them into the ground. The product was carefully put aside in the fall, and planted in the spring, and so on until the fourth year, the yield being good, and the actual product was four hundred bushels! The farmer, seeing the prospect that the potato field would by another year cover his whole farm, asked to be released from his promise.

With the same calculation, prudence, and industry, how many who are disposed to regard the trifling things on which fortune is built as too small potatoes to receive their attention, would have been in independent circumstances if they had husbanded small advantages. Small potatoes should not be despised, even though there be at first but a few in a hill.—*Maine Farmer.*

Signs of a Poor Farmer.

He grazes his mowing land late in the spring. Some of his cows are much past their prime. He neglects to keep the manure and ground from the sills of his barn. He sows and plants his land till it is exhausted, before he thinks of manuring. He keeps too much stock, and many of them are unruly. He has a place for nothing, and nothing in its place. If he wants a chisel, or a hammer, he cannot find it.—He seldom does anything in stormy weather, or in an evening. You will often, perhaps, hear of his being in the bar-room, talking of hard times. Although he has been on a piece of land twenty years, ask him for grafted apples, and he will tell you he could not raise them, for he never had any luck. His indolence and carelessness subject him to many accidents. He loses cider for want of a hoop. His plow breaks in his hurry to get in his seed in season, because it was not housed; and in harvest, when he is at work on a distant part of his farm, the hogs break into his garden, for want of a small repair in his fence. He always feels in a hurry, yet in his busiest day he will stop and talk till he has wearied your patience. He is seldom neat in his person, and generally late at public worship. His children are late at school, and their books are torn and dirty. He has no enterprise, and is sure to have no money; or, if he must have it, makes great sacrifices to get it; and as he is slack in his payments, and buys altogether on credit, he purchases every thing at a dear rate. You will see the smoke coming out of his chimney long after daylight in winter. His horse-stable is not daily cleaned, nor his horse curried. Boards, shingles, and clapboards are to be seen off his buildings, month after month, without being replaced, and his windows are full of rags. He feeds his hogs and horses with whole grain. If the lambs die, or the wool comes off his sheep, he does not think it is from want of care or food. He is generally a great borrower, and seldom returns the thing borrowed. He is a poor husband, a poor father, a poor neighbor, a poor citizen, and a poor Christian.—*Baltimore Farmer.*

A WINDFALL. The *Syracuse Journal* estimates the amount of money left there by the visitors at the great State Fair, at \$500,000.

The Markets.

CAMBRIDGE CATTLE MARKET, Nov. 28.

At market, 876 Cattle; about 678 Beeves, and 200 Stores, consisting of Working Oxen, Cows and Calves, Yearlings, Two Years Old, Three Years Old.

*Prices. Market Beef—Extra, \$6 per cwt.; first quality, \$5 50; second \$4 75; third \$4; ordinary, 2 50, \$3 a 3 50.

Stores—Working Oxen—\$45, 50, 57, 70, a 85. Cows and Calves—\$15, 20, 25, a 28. Yearlings—\$5, 7, 9, 10. Two Years Old, \$10, 12, 15, 17 a 20. Three Years Old, \$12, 15, 20, 25, a 27.

Sheep and Lambs—3,760 at market. 3500 sold at 9 P. M. Prices—Extra, 2 25, 3 50, \$4 a \$5. By lot—\$1, 1 25, 1 60 1 75 a \$2.

Swine—4½ a 5c. Retail, 5 a 6c.

Remarks—In consequence of the large amount offered for the last few weeks, there has been hardly any sales, and prices have slightly declined.

64 cars came over the Fitchburg Rail Road, and 41 over the Boston & Lowell Rail Road, loaded with Cattle, Sheep, Horses, Swine and Poultry.

Number from each State: Maine—256 cattle, 1000 sheep and lambs; New Hampshire—182 cattle, 430 sheep and lambs; Vermont—371 cattle, 2014 sheep and lambs; Massachusetts—67 cattle, 16 sheep and lambs.

*N. B. Beef—Extra includes nothing but the best large oxen, well stall-fed at least one year.

First quality consists of large fat oxen, stall-fed at least several months.

Second quality includes the best grass-fed oxen, the best stall-fed cows, and the best three years old steers.

Third quality consists of good oxen, fat cows, and fat three years old steers.

Sheep—Extra consists of choice Bucks, and fancy Ewes for stock and the best Cossets.—*Advertiser.*

BOSTON, Dec. 29. WOOL. The low and medium grades of Foreign and Domestic are still in good demand at full prices.

Prime Saxony Fleeces, washed, lb.	45	a	48
American full blood, "	38	a	40
do "	36	a	38
do "	33	a	35
do " and com.	30	a	32
Smyrna, washed, "	16	a	20
do unwashed, "	8	a	14
Bengasi, do	7	a	9
Buenos Ayres, "	8	a	20
Extra Northern pulled lamb, "	40	a	42
Super do. do. do.	36	a	38
No. 1 do. do. do.	33	a	35
2 do. do. do.	25	a	27
3 do. do. do.	15	a	16

—*Boston Courier.*

FANEUIL HALL MARKET.

WHOLESALE.				SEED—RETAIL.			
Beef, fresh, lb.	7	a	12	Eggs, doz.	00	a	20
Mutton, 1st qual. 6	a	8		Apples, barrel	2 50	a	3 50
2d "	4	a	6	Beans, bush.	1 50	a	1 75
Lamb, lb.	3	a	7	Peas, bushel	0 00	a	0 00
Veal, lb.	4	a	8	Potatoes, barrel	2 00	a	2 50
Pigs, roasting, 1 00	a	1 22		Onions, bush.	75	a	0 00
Chickens, per lb.	10	a	14	Honey in comb	10	a	20
Turkeys, per lb.	10	a	14				
Geese, mongrel, 1 25	a	1 50		Clover, North. lb.	12½	a	00
Pigeons, dozen, 1 00	a	1 25		Southern, "	8	a	9
Pork, per 100 lbs.	5 00	a	6 00	White Dutch, 20	a	25	
Lard, best, pr. bbl.	7 00	a	7 50	Lucerne, or French,	33		
Western, keg, 7 50	a	8 00		Herdsgrass, bush	3 50	a	0 00
Butter, lamp, lb.	20	a	25	Red Top, bushel			
do. Arkin, lb.	12	a	18	Southern, "	1 25	a	0 00
Cheese, new milk, 6	a	7		Northern, "	00	a	67½
do. four meal, 5	a	6		Orchard Grass, "	—	a	2 00
				Fowl Meadow, 2 50	a	0 00	

Rhubarb Cultivation.

The red Goliath rhubarb is one of the best of the hybrids for culinary purposes, and as superior to the old, harsh, dock-like rhubarbs which were generally prevalent even ten or eleven years ago, as our cultivated celery is superior to the rank weed of the same name which grows by muddy ditches. It is as easily propagated as any other perennial vegetable; and so hardy as to resist the frosts and vicissitudes of our severest seasons; and of all the esculents for pies and tarts and puddings, it is the most easily prepared. It is so prolific, too, that half-a-dozen roots would keep a small family constantly supplied, during four months of the year, that is from the beginning or middle of April, according to the forwardness or backwardness of the season, until the beginning or middle of August; and it is sometimes preferred to all other vegetable substances for the purpose of pastry, throughout the summer, even where fruits of every kind abound. Stalks of the red Goliath rhubarb have been known to measure six inches in circumference and nearly two feet in length, so that only one of them was required for a pudding. So delicate and soft, too, is its texture, that as soon as it arrives at the boiling point, it becomes a fine pulp, and is already sufficiently cooked. As a garden production for culinary purposes, it is certainly of much value, being in perfection precisely at that season when apples become tough and scarce, and before gooseberries have made their appearance. Its flavor is so delicate, that it ought not to be mixed with any other ingredient than sugar; and on no account should it ever be peeled. Its leaves are of enormous size—sometimes four feet long and three and a half wide; its roots also are gigantic—so large that, in the course of three or four years, a single root, when dug up, would fill a wheelbarrow; hence the plants require a wide space—say five feet every way, or five feet by six. Either this hybrid or any other kind of culinary rhubarb may be propagated from seeds, or from young roots of one year's growth, or from clean offsets with each two or three bold eyes. The soil should be rich, and may be prepared in the same way as asparagus beds. Seeds may be sown either somewhat thickly, with the view of the plantlets being transplanted in a few weeks, or at wide distances and in regular rows, with the view of the plantlets being merely thinned out and allowed to remain permanently when raised. The sowing may be done in September or October, and the final thinning toward the close of the following summer; and intermediate cleanings and hoeings must be given in spring.—Roots or offsets may be planted in March, in dry weather, in an open state of the ground, and during a temperate state of the atmosphere. Plants from vigorous roots may be available for use so early as four or six weeks after planting; but, generally, plants from offsets ought not to lose a stalk or a leaf, except by natural decay, till the following year. In ordinary culture, nothing further is done, except to manure the bed in autumn after the leaves have decayed—and even the waterings in a time of drought are not attended to; but in more refined culture,

some special methods are used for promoting luxuriance, succulency, flavor and blanching. In autumn, the decayed leaves are laid in little trenches, formed along the centre of the space between the rows, sprinkled with a handful or two of salt, and covered with the earth that had been dug out; as the winter approaches, a coating of well decomposed stable-manure or leaves, or a mixture of both, two or three inches deep, is laid round each plant to the extent of two feet; and in the open weather of February, or before the new growth appears, the whole bed is forked over, and a mimic mound of drift sand, or of light porous earth, or of the soil in the central space between the rows, is formed to the thickness of a foot over each plant,—and this mound must be removed as soon as the season of pulling or cutting ceases. When the red Goliath is gathered for use, the stalks should never be cut from the bed, but wrenched sideways with a sudden twist, and they will then come away entire from their junction with the root,—round, flat, clear, and as white as milk. As soon as the growth of rhubarbs of two or at most three years old becomes vigorous, the flower-stem begins to ascend from the root-crowns of each plant, and this will readily be distinguished from a leaf stalk and ought instantly to be pulled away.—*Rural Cyclopaedia*.

CORN COBS. A friend who had read an article in some paper, recommending corn cobs, ground or unground, as constituting a valuable feed for stock, undertook to test the truth of the statement for himself. He had a large quantity on hand, and after providing himself with the proper vessel, (half-hogshead tub,) he filled it with cobs, and then with a solution of salt in water. In this steep the cobs were suffered to remain till they had imbibed a sufficiency of the fluid to render them soft. In this condition they were fed out to his stock—half a peck to a full-grown cow or ox in the morning, and the same quantity at night. He remarks that all his animals are extremely fond of them, and that they consume a much less quantity of hay and grain than before he commenced giving them cob feed. Neither do they require salt in its natural state. He has also ground several bushels of cobs, and finds the meal an excellent article for making "mush."

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following
TERMS:

For a single copy, - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " " - -	3 00
16 " " " " " - -	4 00

And any greater number at the rate last named, or
25 cents per copy.

Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

SCHOOL JOURNAL

AND VERMONT AGRICULTURIST.

Vol. III.

WINDSOR, VT., FEBRUARY, 1850.

No. 10.

THE SCHOOL JOURNAL.

From the Report of the State Superintendent.

Teachers.

In regard to the general qualifications of our teachers, the Superintendent is prepared to assert with confidence that there has been a decided and visible advancement within the last four years. Although as a whole they are still far from being what we would desire, yet speaking in comparison with the past we may, without any exaggeration, affirm that among them, generally, more liberal and just views prevail in regard to the whole subject of education; interest and zeal in their work have succeeded to indifference and apathy; a purpose to improve their pupils has been substituted for a desire to pass their time of employment and receive their pay; order and system have taken the place of chance-work and confusion in the general management and regulation of their schools; and *improvement in their methods*, as well as *life in their manner*, of teaching, has happily supplanted a dull, formal and lifeless routine. Indeed, considering the starting point at which they began, the low standard of qualification which universally prevailed, the limited means of improvement within their reach, and the poor encouragement held out to such improvement so long as the community failed to appreciate its value and importance, many, very many, of our teachers have done well—excellently well. They have done all that an earnest spirit would enable them to do to fit them for their work and to stimulate them to fidelity in its performance. Yet even to such—to the best—we would say, "*Excelsion*,"—"still upward and onward."

As a corresponding result of this general advancement in the qualifications of our teachers, carelessness, listlessness and indolence have been exchanged for earnestness, and thought, and study, among their pupils; and a love of the school, and a new-born interest in its pursuits, have succeeded to a deep-seated dislike for the place of instruction.

We speak of these things, of course, as general results, and not as effects which are universally observable. Instances there doubtless are, and many of them, too, in which individuals and neighborhoods have been quite successful in their attempts to resist the impulse that would have urged them onward,—in their efforts to hide themselves from the light that

was kindling around them. But, these few exceptions apart, the increased interest manifested by teachers in their work, and their more earnest efforts to prepare themselves for their high duties,—although this interest and these efforts have doubtless differed in degree in different quarters,—have been apparent to every observer. And if such efforts are no guarantee of real improvement,—it we might not infer that a corresponding advancement in their ability to teach, and an increased usefulness and enlarged success as teachers were sure to follow,—then we must conclude that all study and toil are unavailing to secure ability and skill in any of the pursuits of life, and that there is but an imaginary difference between intelligence and ignorance, civilization and barbarism.

In regard to the amount of compensation paid to teachers, it will be seen that a steady improvement is going on. The average sum paid by all the districts in the State, the past year, was \$13.78 per month to male teachers, and \$5.60 to female. The rates for the previous year were \$13.12, and \$5.26; and four years since \$11.72, and \$4.75. Yet it is to be borne in mind that the absolute amount paid in the State as compensation to teachers seems not to have increased during that time. The reduction in the number of districts, and the more extensive employment of female teachers, appear to have balanced the increased rates of compensation. And at the same time there appears to have been, during the four years, an increase in the average length of the schools. There has been, it is true, an apparent falling off in the length of schools for the past year of about a half-week from the year previous,—the length for that year being reported at twenty-five weeks, and for the last year at about twenty-four weeks and a half. But it is believed this is to be explained, perhaps wholly, and certainly in part, by the fact that the returns for the last year in regard to the length of schools are much more complete than they were for the preceding year; and it is the smaller towns and feebler districts,—those ordinarily supporting the shortest schools,—that more generally fail to be reported.

DIFFUSION OF BOOKS. If it is true that a wise man, like a good refiner, can gather gold out of the drossiest volume, and that a fool will be a fool with the best book, yea, or without a book; there is no

reason that we should deprive a wise man of any advantage to his wisdom, while we seek to restrain from a fool that which, being restrained, will be no hindrance to his folly.—*Milton.*

Morals and Manners.

The discussions which have been held on the importance of bestowing more attention upon the morals and manners of the pupils in our district schools, has not been in vain. Scholars begin to say *yes, sir*, and *no, sir*, instead of *yes* and *no*,—to make bows and courtesies upon entering and leaving the school room,—to rise in their seats to greet visitors of the school,—to treat their teacher with the affection of children rather than with the familiarity and rudeness of street loafers and rowdies,—in short, to behave so that both parents and visitors are pleased rather than disgusted with their manners. I notice, too, where attention has been paid to manners, that the pupils themselves are pleased with the change, and feel a sort of pride in the manners of the school. Teachers, too, who have attempted it, have found success in giving their pupils instruction in "good behavior," including morals; and it is found in many villages that the common school has become a school of virtue, instead of a school of vice, as it too often is. What may we not hope for our country, when the youth in all our schools shall be properly instructed in "good behavior," as the law directs! What joy will it bring to the bosoms of parents to have their children breathing, in the school room, the atmosphere of virtue, instead of the polluted atmosphere of vulgarity and vice, as formerly? How many children have found the common school only a preparatory school for the jail, state prison, or the gallows! How many of those lesser vices, which injure society and render individuals and families unhappy, have their origin in the bad influences of the old school house! We have cheering evidence that a better day is dawning,—that parents are beginning to see and apply the remedy to this evil.—*Report of Rev. J. Tufts.*

Massachusetts Educational Reports.

The first glory of this State is its religious institutions, and the second its educational system. The culture of the heart and mind is the aim of both, and both seek to secure for all within their influence a happy sojourn here, and a blissful existence hereafter. Those upon whom is devolved the responsibility of this culture, if they are true to their calling, will experience many anxious hours, and undergo many wearisome pilgrimages; but the glimpse of success which they catch from time to time will in the end brighten and expand into something like a realization of their fondest hopes for the present, and a vision of higher realities for the future.

We never read the annual reports of our State Educational Board, and of their Secretary, without reflecting upon the greatness of the work they have undertaken, and the responsibilities they have assumed. Here are more than two hundred thousand beings, all just starting out in the freshness and ardor

of youth, and without any definite conception of what is before them, to become candidates for the rewards of virtue or the penalties of vice. Legislators, who make systems for the cultivation of all; educators, who shape these systems into practical forms; school officers, who impress these forms upon those they employ; teachers, who receive young hearts yet plastic to the home influences of good or bad example; parents, especially mothers, who control these influences in a thousand minute and apparently unimportant ways,—all have to share more or less in the duty of seeing that these children start in the right path on their journey through life.

The twelve annual reports of the late Secretary show what a State may do for the culture of its masses. Horace Mann took the educational system as it had come down with gradual modifications from a religious ancestry, and gave to its improvement the best energies of his strong and active mind. The theory of education was far advanced towards perfection by him, and the agencies for its more thorough application set fully in motion. The machinery was made, and the wheels were at work in all their degrees of complication, when the present Secretary, a man of equal mind and purpose with his energetic predecessor, undertook to superintend the work in its practical details, and to devise and mature the best methods of rendering it more productive than ever. Mr. Mann, as the Board remark, had discussed the great questions connected with education in so masterly a manner, that little seemed to be left for a new laborer in the same field. Dr. Sears was therefore required to visit generally the schools in different parts of the State, to meet and advise with teachers and others, and diffuse oral information among the people. His report proves that he has well appreciated the vast duty thus imposed upon him, and that he has already laid the foundation of a life-work in a comparatively new field.

We cannot this week say what is suggested by the perusal of this report. One thing, however, is recommended, which ought to find general approval; and that is, that town committees, not the prudential or district committee, be everywhere required to appoint the school teachers. Reasons in favor of this change are given at length and with force by the Secretary, and they must be conclusive to all who have had any thing to do with school matters.

Two acts of munificence are gratefully recorded.—The late Henry Todd, formerly a distinguished merchant of this city, bequeathed a portion of his estate to the Board for the benefit of schools. The sum likely to be realized is at least \$10,000. The Hon. Edmund Dwight, another of our distinguished merchants, who died in April last, also bequeathed a liberal sum to increase the compensation allowed to the Secretary.

There are three Normal Schools in successful operation. That at West Newton, now under the care of Mr. E. S. Stearns, had 73 pupils the first term, 92 the second, and 103 the last. The average age is about 18 years. The Experimental School connected with the institution has 83 pupils. The School at

Bridgewater, conducted by Mr. Tillinghast, has had 65 pupils during the year. That at Westfield has had 148 pupils, of whom 100 were females. The average age here is about 21 years.

There are 215,926 children between four and sixteen years of age, 10,452 over sixteen, and 3,226 under four. The number of scholars in these schools is 191,712 in winter, and 173,659 in summer. The average attendance in winter is 142,967, and in summer 126,502. The average monthly wages paid male teachers, including value of board, has been \$34.02, that of females \$14.19. The money raised by taxes for wages of teachers, board, and fuel, is \$830,578.33.

The 14 counties of the State have appropriated for the education of each child, between four and sixteen, an average of \$3.87. The average for Suffolk, has been \$10.32; Nantucket, \$5.17; Middlesex, \$1.34; Norfolk, \$3.93; Plymouth, \$3.05; Essex, \$3.03; Bristol, \$2.97; Hampden, \$2.83; Worcester, \$2.61; Hampshire, \$2.45; Dukes, \$2.29; Franklin, \$2.17; Barnstable, \$2.10; Berkshire, \$1.96.

The State Library at the Capitol is now in the charge of the Secretary, who has appointed the Rev. Samuel C. Jackson, D. D., of Andover, to perform the duties of Clerk of the Board, and Assistant Librarian. This gives new efficiency to the Department of Public Instruction. There is now, as the Secretary observes, a State office connected with the other offices of the Government, open at all times, and accessible to all the people who have any concern with education. A place of deposit is also thus provided for all documents relating to public instruction, for school books, and rare and valuable works on education.—*Watchman and Reflector*.

The Times and Modes of exerting Moral Influence in Schools.

Moral teachings may be introduced, more or less directly, at all times. For instance, in the study of geography, supposing a scholar was reciting a lesson on Greenland, how aptly might the teacher speak of the wild deer that lives there, and ask the children where they imagine these creatures find food amid those perpetual snows; and then tell them of the delicate moss which grows beneath the surface. In speaking of Africa, he might allude to the foot of the camel, as adapted to the desert sands; and thus with every place on the face of the earth the child might associate some new evidence of God's goodness and wisdom.

At times, the seasons and their varied peculiarities might be spoken of. Bring in flowers, a bird's nest, pick up a feather, or a straw; indeed, nothing can be found but what may suggest some important spiritual lesson, and serve as a text book for natural and interesting remarks.

Suppose a boy should happen to find something in the street, you may say, "I should like to have you all give me your opinion on this subject; James Smith found a dollar in the street, and he said, 'I'm glad I've found it, for I shall give it to my mother to buy wood.' 'You ought not to do that,' says Rich-

ard, 'because it is not yours.' 'And what makes you think so?' says James, 'for I found it, and William Jones found a sixpence the other day, and he said, *finders are keepers*; and, beside, my mother wants wood, and I heard her say this morning, she had no money to buy any.' Now, scholars, what do you say ought to be done? Ought James Smith to keep that money? What reasons could you give why he should keep it; and what, why he should not?

Here the scholars might give separately their opinions, and then the teacher might give his. He might go into the principles of the thing, and close by showing that this money, perhaps, belonged to such or such an one; for instance, James Smith, by making inquiry, might find that the money belonged to a poor girl, the child of a widow, and that it was the pay for making so many shirts, and that she intended to purchase some conveniences for her sick mother.

Thus you may take a thousand questions, and unfold them to children, and *awaken thoughts that will never perish*.

I would have teachers study the heart, and endeavor to implant right motives—to go to the very root and establish sound principles.

Outward goodness is a mere shell. It is but the shadow of a shade. There must be something within or it has no substance. Such goodness will only follow religion, like one of John Bunyan's characters, while it wears her silver slippers. Such goodness falls in the hour of temptation. It reminds one of the oriental tale Lord Bacon tells of, where a cat was changed to a lady, and she behaved very lady-like till a mouse ran through the room, when she sprung down upon her hands and feet and chased it. So with children; if their goodness is only an outward thing, when temptation comes they will down and follow. Give them right motives, sound principles, and they will be firm. In after life the waves of affliction may howl around them, but they will stand serene amid the tempest.—*Watson's Lecture*.

Patience.

A Popular German Student's Song.

Patience, bright and happy spirit,
Sent from heaven to light the earth,
Lead us onward, we would follow,
Guide of high celestial birth.
Thou wilt help us scale the mountains,
Thou wilt help us stem the flood;
Thou wilt give us full-blown flowers
From the slowly opening bud.

All the starry hosts of heaven,
Ne'er yet seen by mortal eye,
Are to thy true follower given;
All that creep, or swim, or fly,
All the secrets of creation,
All that caves of ocean bear;
All the lore of every nation,
Patience, thou dost freely share.

For the School Journal.

A Great Mistake.

It is a great mistake that many, very many should "finish their education," unable to write with propriety their own language. Scholars of ordinary abilities might, in common schools, acquire the ability of writing with a good degree of correctness, to say nothing of elegance. At least they might become able to avoid gross faults of composition. And what acquisition is more important? How great the inconvenience which most attend one through life who does not make this acquisition? How will he find himself cut off from a means of happiness when he would write,—how from a means of usefulness when he might write, and how will he find himself subjected to mortifications when he must write. How cruel the injury which he suffers, and which he will suffer, as long as he shall have occasion to maintain intercourse with mortals! And why is it, that in some schools, if not in many, a large proportion of the scholars never take hold of grammar as a study? And why is it that so many who do study it, never know much about it? By many its importance is not appreciated, and it is looked upon with aversion.

But let me ask, do teachers appreciate this study? Do they invest it with as much interest as they ought? Are they qualified as they ought to be? I know that some of them are not. I know that some of them can bear examination in arithmetic better than in grammar. And I know that some who have had something to do with algebra, ought to have had more to do with grammar. Grammar may be invested with interest. Scholars may become enthusiastic in it. Let it be so, and one great difficulty will then be obviated. But grammar should be taught practically. The scholar should be drilled, not only on good composition, but on bad, till able to see its faults. He should write. The business of composing can be brought down to the abilities of young learners even, and certainly the shortest way to learn grammar thoroughly, is to learn it practically.

Schools in Franklin County in 1850.

No. 1. House of brick, with a neat fence in front, a wood-house and wood in it. The house is comfortable and pleasant, but with low, moveable seats.—The house will accommodate about fifty scholars. The number belonging to the district is about one hundred and fifty! The house is crowded to excess by young scholars.—a few advanced,—but the most of them backward. Scholars quiet and studious. No whispering. The teacher is intelligent, experienced, good natured, and "apt to teach." School has been visited once by the committee,—is suffering most from an indiscriminate mixture of large and small scholars. Were this, and the neighboring district united in one, and the scholars sorted according to age or advancement, the advantage would be great.

No. 2. House old, cold, rickety, small and altogether uncomfortable. No wood-house, and the school disturbed by wood-chopping at the door.—School small, but well behaved, and doing well.—

Teacher does his work in a thorough, quiet manner, and is more anxious to have his work well done, than to gratify petulance by scolding and ear-pinching.

No. 3. House just built, and for size, form of construction, inside and out, and finish of workmanship, is a model school-house. The walls and desks are painted white,—the tops of the desks being painted green. The windows are shaded with curtains,—room well ventilated, and in the matter of good, breathable air, is in healthful contrast to most school rooms. There is a small, but well selected library in the school-house, and maps and apparatus of the value of \$40. The house has the appearance of being built for purposes of education and civilization. Scholars neatly dressed, and well behaved, and deserve to be commended as good readers, and for general promptness in recitation. No whispering.—Teacher entirely devoted to his business, industrious, and ingenious in the Art of teaching.

No. 4. House old fashioned, with long desks, low walls, and too many windows; but, on the whole, not bad. About 30 scholars,—some studying, and and others laughing and whispering continually.—Teacher young, and inexperienced,—governs badly, and with too much ill-nature.

No. 5. House same as last, with little wood and no wood-house. Some of the scholars studious, others very idle. Teacher young and bashful, but well educated, and shows much interest in his scholars,—with small wages and encouragement from the parents. Blackboard not used, and there is a manifest want of order in the time and manner of recitation.

No. 6. House new, large, and of brick, well constructed, but situated within a few feet of a blacksmith's shop. No blackboard, or chair for the teacher. Number of scholars large, who are slovenly in dress, very noisy,—studying but little, and moving from seat to seat, and whispering incessantly. No regular time for recitation,—classes on the floor very disorderly, whispering and moving about, missing and spelling words with the same indifference. Teacher manifests a etioical indifference, and lack of enterprise, rarely seen in a Yankee school-master.

No. 7. A good house, with a bell,—scholars well behaved and studious. Lessons well recited, but reading performed in a tone almost inaudible.—Teacher has taught twenty years,—governs effectually and with ease, teaches with kindness and skill.—Blackboard not used, and the recitations in arithmetic should be daily, and not once in a fortnight.

No. 8. House large, and well constructed, but projects too far into the street, and has but one door; is well ventilated, and supplied with wood more than half of the time. Scholars well behaved, and well advanced in their studies. Of course, there are wretched exceptions. Teacher active and intelligent, and knows what teaching means. Keeps a record of attendance, and uses the blackboard often; everything has its time, and there is a time for everything.

The Albany Dutchman perpetrates the following hard hit at tobacco chewers:

"A chemist in New York has just invented a

substitute for tobacco, which will doubtless soon supersede the weed, as it is just as nasty and a good deal cheaper."

Earnestness.

From R. S. Howard's *Lecture before the American Institute of Instruction.*

The influence of an intelligent and earnest teacher, whose book is in his head, and whose heart is in his work, is immense; and to it must we look mainly, as it seems to me, for the improvement of our schools. *For as is the teacher, so generally will be the school.* If the teacher is unneat in his person, slovenly in his dress, coarse in his language, or uncultivated in his manners, these disagreeable traits will surely reappear in his pupils. If he is sleepy and sluggish, you will find a sleepy and sluggish school. You will there find the scholars yawning over their books, and lounging about with their heads on one seat, themselves in a second, and their heels in a third, contracting habits of laziness, which will cling to them like the poisoned garment of Nessus, spoken of in ancient fable, and will prove his ruin.

So also the noisy teacher will make a noisy school.

On the other hand, if the teacher is a MAN, in the best sense of that word, intelligent, refined, energetic, and in earnest, he will leave his impress upon the whole school. His influence will reach parents as well as pupils, and the good accomplished can hardly be estimated.

Do I then overrate the importance of earnestness in teachers? *They*, beyond all others, as it seems to me, should be earnest men. They should have something of the true Spartan self-devotion, which makes a man resolve "*to succeed or die.*"

This is demanded by the position which they now occupy, and by the nature of their occupation,—its responsibility and far-reaching results.

First, then, the teacher's present position in society demands earnestness.

Some fifteen or twenty years ago, one of England's greatest statesmen, speaking of the elevation of Wellington, a mere military chieftain, as he sneeringly called him, to the premiership, said, "Field Marshal, the Duke of Wellington, may take the army,—he may take the navy,—he may take the great seal,—he may take the mitre. I make him a present of them all. Let him come on, sword in hand, against the constitution, and the English people will not only beat him back, but laugh at his assaults. For the mere soldier can do nothing in this age. And why? Because," as he significantly adds, "there is another personage abroad—a personage less imposing—in the eyes of some, perhaps, insignificant. THE SCHOOLMASTER IS ABROAD; and I trust to him, armed with his primer, against the soldier in full military array." Ever since this high compliment was given, the business of teaching both in England and in this country has been rising in dignity and importance. Teachers now occupy a proud position. There is no class of men, if we except the clergy, who are exercising a greater influence. They are forming the taste, and developing the minds, and moulding the manners and

morals of the generation which shall succeed the present in the high places of power and responsibility. Their present position was not obtained without labor, nor can it be maintained without earnest effort. The time has gone by, when Ichabod Cranes and Master Dominies will answer the public expectation. The teacher must now be wide awake—must know what he is about—must understand "*the whys and the wherefores,*"—and be able, as Locke Amaden says, "*to give the reason of things.*"

Again; the nature of the teacher's occupation is such as to require earnestness.

His work is a difficult one. I have thought that it requires a quicker wit and a wiser prudence, more tact, more talent, more every thing that goes to constitute a shrewd, common sense man to manage successfully a common school, than would be requisite in almost any other profession. The teacher of such a school, at first, meets his pupils as strangers. He must at once map out and classify his scholars, so as to give to each and to all something to be done. He must furnish employment for them, or they will furnish employment for him. He must teach a great variety of studies. While hearing the recitation of one class, he must keep an eye upon the rest of the school. His scholars usually differ widely in age, capacity, attainments, dispositions, and in all their habits of thought and action. He must encourage the timid, incite the sluggish, detect the cunning, and reprove the froward. He must bear patiently with the ignorant—sometimes with the impertinent—perhaps the impudent;—and must speak a fitting word, at the fitting time and in the fitting manner, to each and to all, if he would be a successful teacher. To do all these things well, and many more, would surely seem to require a man who had his wits about him; one, who knew distinctly *what* to do, and *how* to do it. A man who does not think more than once or twice a week, and then does not have more than half a thought, is not fit to be a teacher. Nor is that man fit for the office, whom it takes half an hour to turn round, and then does not get more than half round. A man must be awake himself, if he would effectually wake up the minds of others. He must be himself in earnest, if he would make his pupils in earnest and train them, as far as human power and agency can train them, for usefulness and happiness in life.

Surely the teacher's work—its vast responsibility, demands earnestness. He is educating immortal minds—minds that will live on, when every star which now looks down upon us like the eye of an angel, shall have faded forever from the evening sky. Look into the school-room. In the glowing language of Horace Mann,—"*Survey those thickly-seated benches. Before us are clustered the children of to-day, the men of to-morrow, and the immortals of eternity. What costly works of art, what splendid galleries of sculpture or of painting, won by a nation's arms, or purchased by a nation's wealth, are compared in value to the treasures which we have in these children? How many living, palpitating nerves, centre in their young hearts;—and as they shall advance in life, other living and palpitating nerves, which no man can*"

number, shall go out from their bosoms to twine around other hearts, and to feel their throbs of pleasure or of pain, of rapture or of agony. How many fortunes of others shall be linked with their fortunes and share an equal fate. As yet to the hearts of these young beings crime has not brought in its retinue of fears, nor disappointment its sorrows. *Their joys are joys, and their hopes more real than our realities*; and as the visions of the future burst upon their imaginations, their eye kindles like the young eagle's at the morning sunbeam."

Can you look upon such a scene as this without emotion—without feeling your spirit stirred within you?

And again, contemplate the influence of the teacher in its far-reaching results.

We none of us, perhaps, think enough of the amazing truth, that in a world like this, influence never dies. The good and evil which men do, live after them. And hence it comes to pass, that no man, when he dies, is wholly dead. The man dies, but his influence lives. An arrow may cut the air, and yet leave no trace behind to show us where it passed. A ship may plow the ocean, and the succeeding wave efface from the bosom of the waters the impression it made. Not so with men. *They leave behind them an ineffaceable impression. Their influence will live and spread and extend itself in ever widening circles, until we can by no human arithmetic estimate its power.*

Now if this is true of all men, even the obscurest and most insignificant of earth's millions, much more is it true of teachers. *Their influence is direct and powerful. It is the very object of their office to exert it and make it impressive. They are acting upon the young. Every morning, as they enter the school-room, they are about to lay a moulding hand on forming minds; and every evening when their work is done, they have left a deathless impression upon the heart and character.*

Teaching without Books.

Testimony of Lord Brougham, before a Committee of the House of Commons.

HENRY BROUGHAM, Esq., (a member,) examined.

"There is another institution for education at Yverdon, which I also visited in August, 1816. It is under the direction of Mr. Pestalozzi, and consists of above one hundred boys, who are taught every branch of learning by different masters, upon a principle quite new and deserving of notice. Mr. P. observes, that the received methods of instruction are too mechanical; that children are taught by rote, and that their reasoning faculties are not sufficiently called into action. Accordingly, all his pupils are taught in a way that excludes mere mechanical operations, and certainly tends greatly to exquise the mind. No books are allowed; but the master, standing before a large board or slate, on which he writes, cyphers, or draws, (as the case may be,) explains or demonstrates to the boys who sit around him, and whose attention

is kept awake to every process by constant examination, by which they are obliged to go through the steps themselves *viva voce*. I saw many of them, who had gone a considerable way in the mathematics, without ever having used a book. One had reached the fluxional calculus, of which, from a question I gave him to work, he appeared to have an imperfect notion, although, in a far shorter time than he had been learning, the young men in this country acquire great expertness in the highest branches of analytical science. But he, and the others whom I examined, had certainly a very accurate knowledge of the *rational* of all the operations which they had learned, and their minds were much strengthened, I doubt not, by the constant exercise of thought unconnected with notation. I conceive that analytical investigations might be rendered more useful, and might approach more to those of geometry in their beneficial effects upon their reasoning powers, were somewhat of Mr. Pestalozzi's principles adopted. *That he carries it too far, seems equally clear to me; and I have been informed that his pupils, when they come to mix in the business of life, in counting-houses, &c., are very much thrown out, at least at first, by their having been unaccustomed to the use of books. I should however wish to be understood as speaking with diffidence on this subject, from my imperfect examination of it.*

• Pestalozzi among the Children.

THE BEGINNING.

Almost immediately after Pestalozzi's arrival, and before any accommodation could be provided, numbers of children presented themselves; and, as most of them were utterly destitute, it was impossible to refuse them shelter and protection.

"Alone, (he says) destitute of all means of instruction, and of all other assistance, I united in my person the offices of superintendent, paymaster, steward, and sometimes chambermaid, in a half-ruined house. I was surrounded with ignorance, disease, and with every kind of novelty. The number of children rose by degrees, all of different ages; some full of pretensions; others trained to open beggary; and all, with a few solitary exceptions, entirely ignorant. What a task! to educate, to develop these children—what a task!"

THE RESULT.

"Discontent and peevishness ceased, and from seventy to eighty children, whose dispositions had been far from kind, and whose habits were any thing but domestic, were converted in a short time into a peaceful family circle, in which it was delightful to exist.

"He endeavored, at first, to let the children feel the advantages of order and obedience; and the playfulness of his nature suggested to him a variety of means by which he could catch and fix their attention, whilst, at the same time, he afforded them real amusement. He was careful never to wear out their patience by too long continued exercises. If he required silence, he would hold up his finger, and ask them to look at it, and keep still till it came down again,

* The other referred to is De Fellenberg's.

and the interval, which they readily granted, he employed in telling them some word or sentence which he asked them to repeat. This being done, he would dissolve the spell, and having allowed them the enjoyment of their freedom for a few minutes, he would, by some other trifle, fasten their eyes and tongues again. The children were thus led on in mere play to a more serious attention, and they soon saw how much more easily and successfully he could teach, and they learn, if they consented with one accord to lend themselves to his instruction. The more willing they submitted to these little self-denials, the more progress did they make in the art of self-command, which it gave them pleasure to practice after they had once reached a certain point.

"He often appealed to their own feelings and good sense, as to the necessity of self-denial and restriction. If some disorder arose from inattention to little things, he would say to them, 'You see now how all this great disorder has come upon us by a trifling neglect. Does not this show that in so large a household every little matter should be carefully attended to?' At other times, if it became necessary to correct a child of some bad habit, he would tell him, 'It is not on your account only that I desire you to leave off this, but on account of the other boys also, who might learn it from you.'

"By these familiar conversations he not only gained his point in almost every case, but produced among his pupils a general feeling in favor of good order, which is far more effectual than the most rigid discipline and severity."

Close Observation.

I judge that much that distinguishes one man from another, mentally or intellectually, is close and careful attention to subjects. Few persons, in my opinion attach adequate importance to the value of this habit.

One man, travelling from Cincinnati to Hamilton, whose attention has not been applied to the subject, will hardly be able to tell his auditor the succession of any two or three objects on the road. He saw a house at a given distance—but does not recollect whether it was brick or frame, one or two stories, had the gable or side to the road, was painted or unpainted. He paid no attention to these circumstances. So of every thing else on the road.

Another individual, who has journeyed at his side, will recollect most minutely, all that passed before his eyes. At such a spot was a hill—just as they ascended it, there was a tavern on the right hand, and a stable at the left—a rod or two forward, on the same side, a road took off, with finger or guide boards. In this way he will recollect and repeat the succession of every object on the whole route.

Whence this difference? The one has taken notice of what he saw,—the other has not.

Cuvier, the naturalist, was so skilled in anatomy as to be able to tell with unerring precision, the kind, habits, and haunts of any animal, its figure of body, and mode of life, from a single bone or tooth! Prof. Agassiz, a German, who visited this country a few years ago, and lectured on topics of science in our

principal cities, when in Albany, before an audience, stated that he could at a glance upon a fish scale, or tooth, tell the kind of fish it came from! And on trial, his decisions were found to be invariably correct.

Almost every one of us has noticed circumstances analogous to this, within his own experience. Mr. Robert Buchanan, of our own city, on a visit to my garden once, astonished me by examining my rose bushes, and classifying their species and character on a slight scrutiny, thus: This rose you got from John Baker, this from Longworth—this from Storer—this from me—and thus he went through the garden, tracing the paternity of every rose bush, and that without a single mistake. This would have been wonderful to me, if the foliage had been out and the roses in bloom, for some of them were of kinds to be found in various gardens here, but it was in the winter, and he had nothing to judge by, but the stalks, which, with the exception of thickness, looked all alike to me.—*Cat's Advertiser.*

An Exercise upon Adjectives.

The following supposes the pupils to have entered upon the study of the nature and use of adjectives. It is intended both to test the correctness of their impressions concerning them, and to give an intimation of the vast treasure of words expressing quality, belonging to the English language. Claude's palette was never one half so well stored with colors as our mysterious, magical, mother tongue.

Assign to the reciting class the name of some object, as, mountain, desert, ocean, etc., and after a moment for thought, ask each to give, orally, adjectives denoting some quality of a mountain, etc., thus:—Mountain; lofty, precipitous, towering, steep, majestic, everlasting, high, desolate, snowy, bleak, rough, verdant, romantic, magnificent, volcanic, icy, overhanging, rocky, dreary, storm-beaten, cloud-capped, sky-piercing, burning, cavernous, flower-clothed, flame-peaked, huge, forest-covered, large, mist-hidden, flaming, conical, gigantic, thunder-riven, jagged, isolated, snow-tipped, herbless, crystal-crowded, threatening, beautiful, cloud crested, etc., etc. The exercise may be varied by requiring each pupil to write upon a slate, all the adjectives he can think of, which modify some word, and then to read them to the class. If the teacher asks for the meaning of each epithet, expressed in other words, the value of the exercise will be greatly enhanced.—*School Friend.*

PESTALOZZI'S WAY OF TEACHING KINDNESS "In order to make them regard each other as brothers, he made them dependent upon each other in a variety of ways. Each child, according to his age and abilities, was in his turn engaged in employments of which the others were to reap the benefit; and as their mutual services were not compulsory, but voluntary, they were kindly proffered and thankfully received. In pursuance of this plan, he introduced mutual instruction."

Such practical lessons are vastly more effectual, both in the school and in the family, than all the lecturing, and story-reading about good boys and girls, that can be achieved.

From the Teachers' Magazine.

A Song.

Written by N. A. Gray, and sung by his Pupils at the close of School.

TUNE—"Yankee Doodle."

There is a time to come to school,
'Tis when the bell is ringing;
There is a time to read and write,
Another time for singing.

La, la, la, la, la, la, la,
La, la, la, la, la, la,
La, la, la, la, la, la, la,
La, la, la, la, la, la.

There is a time to sport and play,
And keep aloof from quarrels;
There is a time to win a name
For virtue and good morals.
La, la, &c.

There is a time when hearts are warm,
And easily are moulded,
When all the latent powers of mind
With skill can be unfolded.
La, la, &c.

There is a time to study hard,
The seeds of knowledge sowing;
There is a time for everything,
And now's the time for going.
La, la, &c.

* The last half of the tune is sung as a chorus to the syllable "la," all beating time and clapping hands on each of the last two syllables.

Learning to See.

The emotions of a man who had been blind from birth, on being restored to sight, are vividly portrayed in the following extract. The patient referred to is Rev. H. Hoskins of Crawford county, Ia., upon whom a surgical operation was recently performed.

"Mr. Hoskins was taken home to Crawford county, before the bandages were removed; and when this was done, we are informed by a gentleman residing in that neighborhood, that the operation was found to have been eminently successful. He describes the emotions of the patient, when suddenly possessed of a sense so novel to him, to be of the most enthusiastic description. Things which he had long been acquainted with through the medium of the other senses, became possessed of a new and surpassing beauty; and roads which he had been used to travel fearlessly, when blind, had to be again learned. His wife and children, whom he had never seen, his friends, his parishioners, his home, every thing endeared to him, became an unending source of delight and new-born gratification. He had the same confused notions of distance which we see the smallest children manifest, and took the liveliest pleasure in beholding the great variety of colors. In short, he was compelled to learn to see, in precisely the same manner that the smallest child does; and to him it was an occupation of the most gratifying nature."

Capg.

CHEMICAL AMUSEMENT.—To ENGRAVE PICTURES ON GLASS. Cover one side of a flat piece of glass, after having made it perfectly clean, with white bees-wax, and trace figures upon it with a needle or other

sharp point, taking care that every stroke cuts completely through the wax. Next make a border of wax all round the glass, to prevent any liquid, when poured on, from running off. Now take some finely powdered fluate of lime, (flour spar,) strew it evenly over the glass plate, upon the waxed side, and then gently pour upon it, so as not to displace the powder, as much sulphuric acid, diluted with thrice its weight of water, as is sufficient to cover the powdered flour spar. Let every thing stay in this state for three hours, then remove the mixture, and clean the glass by washing it with turpentine; the figures traced through the wax will be found beautifully and deeply engraved on the glass, whilst the parts covered by the wax will be left uncorroded. These engravings, when well executed, are very handsome, and as the expense is but trifling, and the ingenuity required so small, it is an experiment certainly worth trying. I must add, however, as caution, that this experiment should be conducted with great care, as regards the skin and clothes, as the substances required are very corrosive.

For the School Journal.

WILMINGTON, Jan. 5. 1850.

MESSRS. EDITORS,—The propositions I send you this time may at first seem very simple, but they have puzzled many wise heads. If you deem them worthy of notice, by giving them to your readers through the columns of your paper you will confer a favor upon your friend,
JIM.

Proposition.

A and B agree to build 100 rods of wall for \$100, each having \$50. And as one end of the wall is more easily built than the other, A agrees to build one end for 75 cents a rod, and B agrees to build the other end for \$1.25 a rod. How many rods must each build?

P. S. A query has been in my mind how the distance or circumference of the earth, and other planets, was found. I should like some information in regard to it, from some of those that are acquainted with the manner of finding it, and thinking I could obtain it through the columns of your excellent Journal, I send you this.
Yours respectfully,
JIM.

To find two different numbers whose sum shall be equal to their product. RULE: Take any fraction whose numerator is 1 more than its denominator, for one of the numbers, and its numerator for the other.

To find two numbers whose sum shall be equal to their quotient. RULE: Take any fraction whose numerator is 1 less than its denominator, for one of the numbers, and this fraction multiplied by its numerator will be the other.

To find two numbers whose sum shall be equal to the difference of their squares. RULE: Any two numbers differing by 1 will answer. The young arithmetician may now amuse himself by the application of these rules, and find an indefinite number of answers.—*Teachers' Magazine.*

THE AGRICULTURIST.

For the Vermont Agriculturist.

Growing Fruit Trees in Vermont.

The man that expects to raise good fruits to any advantage, without some information or knowledge of the business, so as to judge properly of the soil, situation and wants of the tree, and to do it without labor and thought, may as well expect to raise a good crop of corn, planted in a dry pasture, without protection or hoeing.

It is true that mental rather than physical labor is required; but the orchard and fruit-yard must have attention, constant and unremitting,—in fact, the same kind of attention that a favorite domestic animal receives. It requires as much watching, washing, rubbing, as much nicety in regard to its food, drink, and even lodging and protection, to ensure complete success,—and will as abundantly, and more abundantly, repay the toil and anxiety.

This is designed particularly for the benefit of our friends in the elevated parts of Vermont, who say, when asked why they do not raise good apples, that their lands are unsuitable; that their trees have done growing; and, in fact, they can get nothing but poor, worthless native fruit, and that not as good as it was twenty years ago. When asked why they do not graft their trees, they reply that scions will not often grow, and those that do, although they grow well the first year, either entirely winter-kill, or oko out but a feeble and sickly existence. This is not a universal complaint; for in almost every town we find some infirm, respectable, unobtrusive old gentleman, who always has a plenty of good apples. His land is no better than that of his neighbors; but with experimental knowledge, close attention, rather than by physical labor or scientific information, he has done what others pretend they cannot do.

All plants, as well as animals, require an especial food suited to their nature, and must have it, or eventually perish. The old apple-tree that has not grown a particle larger for the last twenty years, has consumed all the sustenance suitable to sustain itself within the reach of its roots; which, upon examination, will be found to have extended a great distance, in search of it; and for want of locomotion the tree has no other alternative than to submit to its fate.

It is in this enfeebled state of the tree that our friends find that scions will not live; for there is nothing in the stock to sustain them. It is therefore necessary, to insure the growth of the young scion, that the tree or stock itself should be put in a growing or wood-making state. This may be done with an especial compost, cheaply and easily obtained everywhere, the principal ingredient for which is common swamp muck. Chip manure, or leaves from the forest, will answer. To which add ashes, new or leached, and lime or old plastering, crushed bones or those left after soap-making, soap suds, urine, old brine, old meat, or the bodies of dead animals cut up, well mixed in the heap. All, a part, or either of these, added to the vegetable matter in suitable or

sufficient portions, is all that is required. Unfermented stable-manure is probably the worst article that can be used; still the urine it contains makes it better than nothing; but it is not so cheap, and is far more suitable for grass and field crops.

All the loose bark should be scraped from the body and large limbs; decayed and decaying limbs should be cut off; most of the good sprouts and healthy limbs should be left, so as to form a good, full top; the ground under the tree should be well spaded or dug up a goodly distance from it, as the roots extend,—and as deep as can be done without injuring them. Plowing will answer, if done with great care, and the grass and weeds well dug out close to the tree; but generally more damage is done to the roots than is gained by it.

Then the composted manure should be spread under the tree, a considerable distance from it, at the rate of five or six bushels for each tree. All weeds and grass should be subdued by the hoe. Pumpkins and other vines may be planted to great advantage.

This simple process will set the tree to growing; and if scions are set when in this state, they too will grow. Follow this process of cultivation and manuring, and the tree will bear more and better fruit than it ever did in its palmiest days.

It is well understood that the summers are shorter in the highlands of the State than upon the east or west borders of it; but to compensate for it, vegetation comes forward much more rapidly, and earlier comes to maturity, owing to the excess of electricity in the atmosphere, making it more pure, healthy and exhilarating, both to animals and plants. Consequently scions set in these highlands, away from their usual abode, where a good year's growth is or ought to be not over twelve inches,—unacclimated as they are,—shoot upwards, rejoicing in their salubrious abode, and without thought for the morrow or the cold winter that is to follow this happy and imperial state of existence, to the height of two, three and sometimes four feet in the season. If this rapid growth is not checked, so that the young wood can ripen and harden, it will of course winter-kill. To prevent this, nothing is necessary to be done but, in the month of September, to cut back the scion to where it is nearly ripe, be it eight, ten or twenty inches. This will check the rapid and upward growth, and enable the scions to stand the cold and frost as well as they will in more congenial climates.

By following these simple rules fully, success is sure; and by neglecting portions of them, your reward will be accordingly. C.

PROFIT IN PEARS. In the fall of 1848, Mr. John Washburn, of Plymouth, bought two dwarf pear trees, (on quince stocks,) at \$1.25 each. He set them that fall, and in less than a year from planting the trees, he took a dozen pears from them, and exhibited them at the annual show of the Mass. Horticultural Society for which he received a premium of \$6, and he sold the pears for \$3—making a dividend of \$9 on the small investment of only \$2.50. The pleasure and reputation of so successful cultiva-

tion will pay ten times the trouble. The variety was the Louise Ben de Jersey.—*N. E. Farmer.*

Vermont Apples.

We are indebted to Mr. Charles Dana, Jr., of Woodstock, for specimens of a very handsome winter apple, which originated on the farm of Mr. Philip Kennedy of Plymouth. Finding it universally liked where known, Mr. Kennedy has propagated it to some extent. Respecting the habits of the tree we have no information. The fruit is large, round, slightly conical. Skin smooth, light yellow, with a few very obscure stripes of deeper yellow, especially at the base, and a blush next the sun with a few scattered dots of deeper red. Calyx closed, set in a wide, deep basin, which is sometimes a little irregular. Stem half an inch long, rather slender, inserted in a narrow cavity, which is marked with dashes of russet. Flesh white, remarkably tender and juicy, and of a very pleasant sub-acid flavor.

To C. Goodrich, Esq., of Burlington, for fine specimens of the Danvers Winter Sweet, Hubbardston Nonsuch, Westfield Seek-no farther, and Johnson apples. Mr. Goodrich remarks that no apples seem better adapted to our climate than the first two; and, in their respective classes, we know of none better. Mr. G. supposes himself to be more fortunate than some cultivators in Vermont, in having the *true* Westfield Seek-no-farther. His is certainly a very beautiful and delicious apple. That called the *Johnson* is new to us. It is below the medium size, flat-tish conical. Skin greenish yellow, profusely ornamented with irregular red stripes and dots. Calyx closed, with reflected segments, set in a rather wide and moderately deep basin. Stem three-fourths of an inch long, inserted in a wide, slightly russeted cavity, half an inch deep. Flesh yellowish white, tender, of a delicate sub-acid. Mr. G. tells us that he received it some years ago from E. O. Hubbell, Esq., of Bennington, who represented it to have originated at Sir William Johnson's place on the Mohawk river, before the Revolution. Mr. G. thinks, from the resemblance, that it is probably a seedling from the *Fameuse*, and represents it to be a healthy, vigorous grower, and a good bearer, and keeps two or three months longer than its supposed parent. It is a good apple; but neither so handsome nor so good as the *Fameuse*,—which is a special favorite with us.

From Rev. Dr. Wheeler, of Burlington, specimens of the Red-streak, the Pomme Gris, and Cornish Gilliflower. The first is not the Red-streak of Downing; but a very tender and juicy fruit, of a lively and pleasant flavor, which we should be glad to know more about. The Cornish Gilliflower is a high-flavored and excellent apple, very decidedly superior to the Gilliflower cultivated in this vicinity; which last is not worth cultivating at all. The Pomme Gris is the favorite winter apple of Canada—a long keeper, tender, high flavored and excellent. It should be tried in all parts of the State; for wherever it succeeds it must be a favorite fruit, and always marketable, at home or abroad.

Ancient Agriculture.

Some people write zealously about the necessity of digging about fruit trees and manuring them, to make them fruitful, as if it were some new thing. Perhaps they never thought of the *horticultural* duty taught in the parable—Luke xiii. 6-9.

Mr. CUTTS, in his able Address, delivered before the Windsor County Agricultural Society, in October last, mentions a similar old truth revived respecting the selection of seed:—

"Much has been said," he remarks, "by our late writers, upon the subject of preparing seed for sowing by steeping it in various ways, and also upon the importance of selecting the best seed, and changing it often; and one might suppose that there had been some improvement in this respect in modern times, and that it was a matter of somewhat recent discovery. But upon examination we find this is a doctrine which has been preached and practised almost as long as we can trace the history of agriculture.—Nearly half a century before the Christian Era, Virgil wrote some lines in Latin, which are translated by Dryden thus:—

"Some steep their seed, and some in cauldrons boil,
With vig'rous nitre, and with lees of oil,
O'er gentle fires the exuberant juice to drain,
And swell the fluttering husks with fruitful grain;
Yet is not the success for years assured,
Though chosen is the seed, and fully cured,
Unless the peasant, with his annual pain,
Renews his choice, and culls the largest grain.
Thus all below, whether by nature's curse,
Or fate's decree, degenerate still to worse;
So the boat's bravery crew the current stem,
And slow advancing, struggle with the stream;
But if they slack their hands, or cease to strive,
Then down the flood with headlong haste they drive."

The fact is, that such leading principles of good farming have been familiar to the few thinking and observing cultivators for thousands of years; and what we want is, that the mass of our farmers should be more thoroughly educated. And by this we do not mean that they should learn this or that fact in regard to agriculture, but that the mind should be awakened and strengthened, and habits of observation and thought formed. Take a really observing and thinking man, from any other profession, and put him upon a farm, and if he has a taste for such pursuits, he will soon be found going ahead of his neighbors, who were born and bred to the business. On the other hand, a youth may be taught, after a fashion, chemistry, botany, and "all the ologies," and yet, when set to manage a farm, be found ready to fall back, or down, into a thoughtless and unproductive routine. Success does not depend so much on what one knows at the outset, as on the condition of his mind in regard to observing, inquiring, and thinking.

PILLAR ROSES. A correspondent of the Scientific American practices the following mode of having pillar roses: Two-inch augur holes are bored through pieces of scantling, three inches by four, and twelve feet long, and one foot apart. They are set in the ground as posts, three feet apart. Near them tall-

growing roses are planted, two of different colors, one on each side of the post, and as they grow, the stems are run through the holes. In this way they will rise nine feet high; no winds can blow the stems off, and no tying is necessary. Branches intertwined, bearing roses of contrasted colors, make a fine appearance. The Bourdeaux, Hybrid, China, and some of the prairie roses, furnish the roses for these blooming pillars.

Potatoes for Planting.

Charles Lee, of Penn Yan, gives the following account of an experiment made with potatoes:

"Permit me here to make a statement of an experiment with potatoes I made last season, and intend to resume it this spring. I selected a dry, sandy knoll of about one acre, and planted on the 2d day of May in the following manner: hills three feet by two, with rows running North and South:

Long pink eyes, one large whole potato in each hill.

Long pink-eyes, two small potatoes in each hill.

Flesh colored, one large potato in each hill.

Do. two small potatoes do.

Long pink-eyes, seed ends of two potatoes.

Flesh-colored, do. do.

Cultivated in the usual way, and harvested the same, with but little rot and no perceptible difference in yield either in rows or hills.

Respectfully, your obt' serv't, CHARLES LEE."

E. P. Prentice made a like experiment, with precisely the same result.—*Cultivator*.

Similar results have fallen under our own observation,—a crop of large and fine Chenangoes, for instance, from a planting of small refuse potatoes. It is said that, although small potatoes may be used with impunity for a crop or two, they will soon deteriorate. But why they should do so, if well-cultivated so as to keep the plant in full vigor, we do not understand. The question is one that ought to be determined by careful and thorough experiments.

Economy in Feeding Stock.

Some men will spend five dollars to save half that sum, and he who starves his stock to save his fodder is neither merciful or wise. Suppose a man keeps two cows through the winter on two tons of hay and forty bushels of turnips, and through the summer on three acres of pasturing—they will, probably, make about 150 lbs. of butter, and raise two calves worth about three dollars each; one of these we will reckon for cow-tax, and the other, with the butter at one shilling a pound, will make the sum of \$28.00 for keeping two cows a year. Now let him give that same food to one cow, and she will make 250 lbs. of butter, besides raising a calf worth five dollars. This, with the butter at one shilling a pound, makes the handsome sum of \$50 for keeping one cow a year. And this is not all, for the pleasure of carrying to the good house-wife a swimming pail of rich milk drawn from one cow, is enough to pay any man for milking; while the mortification of having to strip two poor cows half an hour to get a pail of blue milk, will fill a man with "lean streaks." And this will hold good

through the whole process, from milking to the time the money is pocketed for the butter. I do not say that hay and turnips are the very best feed for milch cows in the winter; one foddering of corn-stalks each day will add to the quantity and quality of the milk, and a few quarts of meal, in addition to the roots, will not only make rich milk, but keep a cow in good heart. To have a cow profitable, I should give her hay in the morning and one peck of roots, corn-fodder at noon, and hay in the evening with four quarts of meal from corn and oats, of equal parts. This, with a good bed of straw for lodging, which, although last, is not of small importance.—*Bost. Cult.*

Postage on Seeds or Grafts.

The following is a copy of the petition adopted by the Cincinnati Horticultural Society for transmission to Congress asking a modification of the post office laws in regard to the transmission of seeds, grafts, &c. The coöperation of Horticultural societies, and friends of horticulture generally, is invited, and we trust will be freely given, in behalf of this desirable reform:

To the Hon. the House of Representatives of the U. S. in Congress.

The subscribers respectfully petition your honorable body for such a modification of the Post Office laws as will enable those persons who are engaged in horticultural pursuits, or others, to transmit by mail, seeds, grafts, and such other horticultural objects as are occasionally sent by mail, at a rate of postage not exceeding that of newspapers, provided they be in packages of not more than two ounces in weight.

Believing that you will at once perceive the general advantage to our country from every increased facility of disseminating throughout its varied districts the various plants and fruits which may be thought useful for cultivation, and especially such as it may be desirable to test in different soils and climates, we considered it only necessary to remind you that the charge of letter postage according to the present system, retards the progress of improvement in horticulture, and therefore deserves modification.

We might add that we have no doubt that the revenues of the Post Office would be greatly increased by the proposed amendment; we consider, however, that by its adoption the public good would be so much promoted that no question of revenue should be allowed to affect it.

THE SOCIETY OF ART has concluded contracts with Messrs. James and George Munday, the public works contractors, for carrying out Prince Albert's projected exhibition of arts and industry by all nations.—The Messrs. Munday undertake, without any security, to carry out the exhibition on their own responsibility, and to indemnify the Society of arts for all expenses and liabilities; to erect the necessary buildings, at a cost of some £50,000, and to provide £20,000 for prizes. From the funds received, Messrs. Munday's expenses, with five per cent interest, are first to be paid; and if any surplus remains, Messrs. Munday are to receive two thirds of it.

Make your Hogs Work.

Hog manure is known to be very far richer than that of the barnyard. Some report the result of experiment to be, that it beats guano. For corn, and all plants of strong appetite, it is unequalled by any other material that the farm furnishes. "The most valuable of manures," says Gray. "It contains still larger quantities [than sheep and horse dung, &c.] and is capable of yielding a large quantity of nitrogen in the form of ammonia." The President of the Essex Co. (Mass.) Agricultural Society, John W. Proctor Esq., lately gave an account of swine-keeping at the Danvers Alms House. After giving the statistics of the Pork, he says:—

"But the principal benefit which the town has derived from keeping and raising pigs in this manner, is that they made the "Poor House Farm," which was very poor indeed, one of the richest and most productive in Danvers, in consequence of the immense quantity of manure obtained from the swine yard. The yard occupies a space covering one-quarter of an acre, made in a "dishing, or concave form." Twice a year, meadow mud to the depth of ten or twelve inches is spread over the yard. There are rooms provided for the hogs to sleep. There a well handy and an abundance of pure water is supplied to them. This, Mr. Proctor thought, of great consequence in promoting their comfort, especially in warm weather. All the refuse matter that accumulated on the farm was thrown into the yard and the hogs were encouraged to work, by good treatment. From one to two hundred heads of the best quality of manure are annually made by them, and this is one of the greatest advantages arising from keeping hogs. He was satisfied that there was great propriety in working hogs."

Driving Oxen.

Those having the care of these useful animals, should never drive them so fast as to cause them to *fall*. A certain writer, in remarking upon this subject, says:

"We sometimes see these animals moving so slow in the field and on the road, that we can scarcely tell which way they are going. This mode of driving is wrong; let them travel at least two miles an hour, and stop occasionally for breath. In this way we prevent their acquiring that slow pace with which the ox is so frequently reproached; and there is no difficulty, with proper management, in keeping him to this pace of two miles per hour. The driver should never let his whip become too familiar with his team. If he suffers it to rest on his cattle's backs, it is very likely to lose its charm: and a parent might as well give his rod to his child to play with."

In Scotland the ox is trained to a quick movement. He is never overladen while young, and it is said rarely falls short of three miles an hour, as common "jog," either on the road or in the field. The slow, almost imperceptible progress of some teams while ploughing, or performing other agrarian operations is oftentimes painful to behold. It impresses one with the idea of great fatigue, and can scarcely be dissociated, in the mind of the observer, from that of extreme

exhaustion and pain. When young, the ox is nimble and sprightly, and as susceptible of speed as the horse. Yet by wrong habits, he becomes heavy and sluggish in his movements, and finally acquires that slow, snail-like pace, which so greatly diminishes his value as draught animal, for most purposes, and which renders the driving of him, wearisome and unpleasant in the extreme.—*Germanstown Telegraph*.

Butter-Making.

From the Report of the Essex Co. (Mass.) Agricultural Society.

There is so much time mispent, and labor lost, in the making of poor butter, that we feel it to be an imperative duty to endeavor to impress the minds of farmers, and of their wives and daughters, with the importance of giving heed to this subject. There are some things in relation to it so well settled, as to be universally known by all those who have any knowledge in the matter. There are others, on which there remain great differences of opinion and variance of practice; as, for instance, in the statements before us, we find some of the makers of butter apply *cold water* freely to the butter, both before it is taken from the churn and afterwards; "to aid in extracting the buttermilk, and to harden the butter," as they say. Others bring it into form without the use of water, and say that its use impairs the flavor, and essentially injures the quality of the butter. How shall it be determined which of these is right? This is a practical question, applicable to every churning; quite too important, therefore, to be left in doubt. Probably most persons do as their mothers used to do, without inquiry whether there is any better mode of proceeding. In an intelligent article upon this subject, from one of the most successful makers of butter in this county, (see *Transactions* for 1840, p. 79.) we find this sentence: "More depends on this than any part of the process, in making good butter. If our dairy women would apply double the labor to half the quantity of butter, and thereby thoroughly remove all particles of buttermilk, this one half would be worth more than the whole, in the condition it is usually sent to the market."*

Mr. Howard, of the Albany Cultivator, authority second to none other in the country, says, "According to our experience, the best butter is not produced by a very *short* nor a very *long* period in churning.

*I am informed by a lady, who was instructed by her mother, who, for a period the memory of man runneth not to the contrary, and the reputation of making the very best of butter, that she never applied cold water, or any other water, to the butter, after it was churned. She considered such application injurious, especially if the butter was intended to be put down, as she said; that is, to be preserved for future use. That it would not keep so well when soaked in water; was not so fine flavored; and was more likely to become rancid. Perhaps my respect for this lady (who is my mother) influenced my opinions; nevertheless, there are hundreds, in Salem and vicinity, who for years used their butter, when they had vigor to work it, who will bear testimony that no more reliable authority could be cited. In a matter of this kind, I should place more confidence in the practical experience of a sensible woman, than in all the chemical analyses of all the Davys and Leibigs combined.

If it is churned too quick, the separation is not complete, and the butter, besides being less rich, is deficient in quantity; if the process is continued too long, the butter is likely to be *oily*. We think our best butter-makers would decide that churning for ordinary quantities, say from ten to twenty pounds, should occupy from *thirty to fifty minutes*." This corresponds entirely with the opinion expressed by Mrs. Nathaniel Felton, who said "she did not want the butter to come in less than thirty minutes; it is not so good when it comes in a shorter time."

We are informed, by some of those who have been most successful in the management of their dairies, that they look more to the *quality* of the milk given by the cow, than the *quantity*; and in selecting their cows to be kept for this purpose, they choose only those which give milk adapted to the purpose. It is unquestionably true, that one quart of milk from some cows, will yield as much, or more, butter than two quarts from others. In selecting cows, therefore, the quality of their milk should be tested, either by making butter from it, or by the use of a *lactometer*, which shows the comparative thickness of cream that will rise on similar quantities of milk. Mr. Holbert, an experienced farmer of New York state, says, "I find, by churning the milk separate, that *one of my best cows* will make as much butter as *three of my poorest cows*, giving the same quantity of milk." We have heard the same thing, substantially, from dairy women themselves. Let those cows which abound in *quantity only*, be turned over to those who care only for filling their measures; and let those that afford *substance* as well as *show*, be kept to supply the churn.

FINE BLOODED SHEEP. A ship from Bremen, has brought twenty-five Saxony sheep, imported by D. W. Catlin, of New York, and C. B. Smith, of Litchfield Co., Conn., and intended as an addition to their flocks in Torrington and Harwinton, Conn. They are from the flock of Maximilian Baron de Speck Leitchena, near Leipsic, Saxony. They combine, says the Tribune, every requisite in fine sheep, fine form, good constitution, compactness and weight of fleece and fineness of fibre. A shepherd accompanies them, with a well trained shepherd dog, with a view of introducing, as far as practicable, in this country, the system of raising and training sheep, as practiced in Germany.

GUANO COMPARED WITH ASHES. Stephen H. Smith, states to a committee of the Rhode Island Society for the encouragement of Domestic Industry, that on one acre of sandy loam, which without manure would have produced twenty bushels of corn, he sowed broadcast on the furrow, after deep ploughing, 500 pounds of the best guano, well pulverized and mixed with four times its bulk of dry loam. After harrowing it was planted with corn. The product was 50 bushels. In 1845, he seeded down half an acre of ground, a sandy loam, with eight quarts of millet, ten pounds of clover, one peck of herds grass, and one peck of red top seed. This lot was dressed

with 350 pounds of guano, worth \$9, applied as above described. On an adjoining half acre he put the same kind of seeds in like quantity. Instead of guano he applied six bushels of uncleaned ashes, worth \$8.* The crop of millet was perceptibly best where the guano was used, and about ten days earliest. The crop of grass in 1846 was one-fourth the largest where the ashes were used. In 1847 the clover had nearly disappeared where guano was applied, but remained well stocked where the ashes were put. The first and second crops this year were decidedly in favor of the ashes.

* Query. Sixty bushels of uncleaned ashes?

EVERGREENS FOR ORNAMENT. In setting ornamental trees, evergreens are generally too much neglected, so that when we see beautiful scenery in summer, after the season of the "scar and yellow leaf," nothing remains but the monotonous scene of leafless trees, and the hoarse winds perform a dirge among the naked branches.

By interspersing evergreens among other trees for ornament, there is a great variety and a more pleasing landscape in summer, and in the cold season, the scene is checkered with something fresh and lively, with dark green foliage, beautifully contrasted with the white mantle that wraps the earth, breaking the sameness often seen in white snow, white houses, and white fences.

Boston Common, for want of evergreens, is robbed of all its beauty and splendor, when stern Winter lays his icy hand upon it. As some trees are decaying on that beautiful summer spot, we advise the trial of evergreens in their place; and the change of crops, by species so various, will give the advantage of rotation in favor of success.

One of the most beautiful of all evergreens is too much neglected. It is the hemlock, of a rich, dark green; and when its young shoots, of a lighter shade, start late in spring, they form a most pleasing contrast with the darker hue of a previous growth; and then it is the most beautiful of all evergreens. The hemlock flourishes on various soil, from wet swamps to the dry mountain top.—*New England Farmer*.

COOKING FOOD FOR SWINE. A good authority says:—"From some experiments of my own, and considerable research into the published results of the experience of others, I am satisfied that ten bushels of boiled potatoes, thoroughly mixed with the pudding that can be made from three bushels of corn or peas, will make as much pork as twenty bushels of potatoes and six bushels of corn or peas, fed raw."

CHARCOAL ROADS. The Maine Farmer says—A correspondent of the Bangor Courier, writing from Wisconsin, describes the mode of making a new kind of road, called Charcoal Roads. We should think that in many parts of Maine the same system might be adopted. The following is the mode adopted for their construction:

Suppose your road is thirty feet wide, the timber on the space which your road occupies is all cut, and

the trees all laid lengthways upon a space say ten feet wide. The pile of trees and brush extending the distance required, is then covered with turf and a fire set at each end, and it will burn and settle as handsomely and even as can be, and is just hard enough so as not to hurt the the horses' feet. The rain that falls upon the road will run off without soaking into it. You have no mud or holes, and the writer thinks it far preferable to plank roads through a timber country.

Cattle Feed.

COMPARATIVE ESTIMATE OF DIFFERENT KINDS.

Hay is the food for cattle during winter. If they can get good hay enough, during the cold season, they do very well. It is not always that the farmer has sufficiency of this for his stock, and hence it is useful to know the comparative value of other articles which may be used as substitutes for it. It is also more agreeable, and we think more profitable, to mingle other articles with hay. We have prepared from various sources the following table:—

Taking good hay as the standard, 100 lbs. of hay equal 276 lbs. carrots; 300 lbs. ruta бага; 317 lbs. mangel-wurzel; 201 lbs. potatoes; 494 lbs. common turnips.

By calculating 60 lbs. for a bushel of any of the above roots, it will be seen that one ton of hay equals 91 bushels of carrots; 100 bushels ruta бага; 106 bushels mangel-wurzel; 67 bushels potatoes; 165 bushels turnips.

From this it will be seen how much fodder you get of each, per acre, compared with good hay.

In regard to straw, experiments have established the following estimate as very near the truth: 700 lbs. of hay equal to 272 lbs. new wheat straw; 166 lbs. barley straw; 169 lbs. pea straw; 94 lbs. clover hay.—*Maine Farmer.*

Subsoil Plowing.

Many farmers in the vicinity of Princeton have determined to use the subsoil plow during the coming season, while those who used it last year are loud in its praise. Dr. Woodhull raised, last year, 57 bushels of wheat on an acre, having no material advantages other than habitually using muck in its compost heaps, and plowing rather deeper than his neighbors. We received the following letter during our stay at Princeton, from Dr. James Carnahan, President of the College at Princeton:—

"PRINCETON, N. J., Dec. 24, 1846.

"DEAR SIR—In confirmation of the remarks which you made in your lectures on the advantage of subsoil plowing, permit me to state an experiment which I unintentionally made in the summer of 1846.

I wished to subsoil a lot in sod, with a hard pan under soil, and, as I had only one team, I engaged a man to turn over the sod before the subsoil plow.—He came and worked one day, and did not return the next. As the time for planting corn was approaching, I directed my farmer to go and plow in the com-

mon way, and to plow as deep as he could. He did so. The following day the other plowman returned, worked a day, and then was absent. The result was that the lot was plowed alternately with the surface plow and with the subsoil.

The whole lot was mowed and cultivated in the same way, except that some parts were subsoiled and some were not.

It will be recollected that the month of August was very dry; the corn on the ground subsoiled suffered very little; that on the part plowed with the surface plow alone suffered much. When the corn was gathered, you could distinguish the very row where the subsoil commenced and ended—the ears were more numerous, and of a larger size.

I did not measure the ground and the corn, but the difference was so obvious to the sight that no one could doubt the superiority of the corn on the ground subsoiled.

This year, the whole of my corn ground was subsoiled, and the yield was very satisfactory. The month of July was very dry and hot, and the leaves of my corn did not shrivel, whilst those in adjacent fields rolled up.

That the subsoil plow will be advantageous in all kinds of soil, I am not prepared to say, but in such land as I cultivate, I am satisfied that the extra yield of one crop will pay the additional expense of using the subsoil plow; whether more than one crop will receive benefit from once subsoiling, I have yet to ascertain.

Respectfully yours,

JAMES CARNAHAN."

The writer of the above has been cautious in giving his views as to the future usefulness of subsoil plowing, &c., and we wish our correspondents would all imitate President Carnahan in this particular, as we are often prevented publishing letters, part of which is important, because the successes in experiment are over-stated. Our own experience with subsoil plowing may be thus stated:—

The effect of one subsoiling, if deep and thorough, will be felt for ten years; and certainly the second year as fully as the first. This, however, will apply more particularly to clayey and hard-pan subsoils; with very sandy soils the effect is observable but slightly the first year, more fully the second year, and if the subsoil plowing be not repeated, its benefits, after three or four years, will be but slightly perceptible. If, however, land previously subsoiled, of even, sandy character, be more deeply surface plowed, the effects of one subsoiling will long be felt from the solidification of carbonic acid gas, or rather the carbon from this gas on the particles of soil which has been reached by the atmosphere at depths which subsoiling alone would have rendered permeable. Occasional subsoiling gradually but certainly improves the quality of sandy soils, and although the benefit is not so evident as with heavier subsoils, still the labor of subsoiling is proportionally less, and therefore the practice of subsoiling, or even trenching, sandy soils, is advisable.—*Working Farmer.*

Corn Stalks.

With a desire to find some better method of preserving corn stalks for winter fodder, (which are so excellent for feeding cows in their green state) I have experimented for my own benefit, hoping to find some superior method to those in general use.

I topped my stalks on the 17th of September, both the two former seasons, and the present season on the 19th of September, as the frost held off, and they remained green still later. I should have considered them hardly worth cutting had they remained standing in the field after the first severe frost. I took a pleasant day, cut them and thinly spread them by the side of the field. Those cut before noon, I bound up and carted into the barn the same day, riding them on poles and keeping the doors and windows open in good weather, stowing them very close together on the poles, the tiers of which, are but three feet apart, and thus a load takes up but little room, and can be stowed by two hands nearly as fast as one can pitch them up. This is the whole work, and two hands can thus cut and secure an acre producing forty-five bushels of corn in a day. Cows will eat up these stalks so clean, that not a vestige is left, of leaf or stalk. Nor can I perceive the least sourness which some so much fear, when proper care is taken to ventilate. Not only the perfectly green appearance of the stalks, but the very pleasant smell of them, indicates their rich value.

An acre of corn producing forty-five bushels, makes five hundred bundles, weighing four pounds each, on an average, which is a ton per acre. The remaining bottom stalks, would make more weight than the tops, and may be preserved much in the same way, by cutting up the whole at the bottom and piking them, and will take about the same time, but it is not so convenient husking the corn. I found that corn cut up early in this manner, and piked, is sound and good.

It is well known that corn stalks contain a large portion of saccharine matter, which will make molasses, and which, when thus cured, forms a glutinous substance, fattening, and productive of milk in cows when fed out early in winter.—*Mass. Plowman.*

OX AND PIG KILLING IN ROME. The implement used by the Roman butchers for killing the ox, deserves to be mentioned, for it is calculated to inflict a less degree of pain on the animal than those used in England. It is in fact a wooden mallet or beetle, with a very long handle and a small head charged with lead, which, while it gives additional weight to the blow, is applied with such astonishing accuracy, that a boy of ten years old, who acts as the butcher's assistant on these occasions, invariably places his hand on the eye of the ox while the butcher strikes the blow, and holds it there without flinching. The mode of killing pigs in Rome is altogether different, and infinitely more speedy than the mode adopted in England; where, in a farm-house for instance, the awful preparations employ the whole little community for several hours previous, and finish invariably with a terrible disturbance and screaming at daylight.—With regard, however, to the Roman method of killing the pigs, a stated day and hour, that is to say,

nine o'clock every Friday morning, is set apart exclusively. Three or four hundred are despatched in the space of half an hour, by means of a sharp instrument of the most simple construction—nothing more, in fact, than a piece of iron wire the thickness of a swan quill, pointed sharp at one end, twisted into a ring at the other by way of a handle, and about six and a half inches in length altogether. With this instrument introduced immediately behind the fore leg, and passed laterally through the brisket, the heart of the animal is perforated.

The Markets.

CAMBRIDGE CATTLE MARKET, Jan. 30.

At market, 603 Cattle; about 500 Beeves, and 103 Stores, consisting of Working Oxen, Cows and Calves, Yearlings, Two Years Old, and Three Years Old.

Prices. *Market Beef*—Extra, \$6 per cwt.; first quality, 5 50; second \$5; third 4 25; ordinary, \$3, a \$4.

Stores—Working Oxen—\$60, 65 a 80. Cows and Calves—\$16, 25 a 30. Yearlings, \$5 a 10.—Two Years Old—\$10 a 20. Three Years Old—\$12 a 24.

Sheep and Lambs—3100 at market; Prices—Extra, \$2 50, \$3, \$4 a \$5. By lot—\$1, 1 25, 1 62, 1 83, a \$2.

Swine—4½ a 5c. Retail, 5 a 6c.

Number from each State:—Maine, 54 cattle; New Hampshire, 157 cattle, 458 sheep and lambs; Vermont, 158 cattle, 1474 sheep and lambs; Massachusetts, 24 cattle, 468 sheep and lambs; New York, 240 cattle, 700 sheep and lambs. Total, 603 cattle, 3100 sheep and lambs.—*Advertiser.*

WOOL—Boston, January 31.

The unusually small supply of Domestic Wool, and the difficulty of importing Foreign Wool which would suit the wants of our manufacturers at a reasonable price, renders it highly probable that present prices will be fully sustained till after another shearing. Pulled wool sells quick at our quotations.

Prime Saxony Fleeces, wash'd lb.	45 a 48
American full blood do	40 a 42
do 3-4 do	37 a 39
do 1-2 do	35 a 36
do 1-4 and com. do	30 a 35
Extra North'n pulled lamb	40 a 42
Super do do do	36 a 38
No. 1, do do do	33 a 35
No. 2, do do do	25 a 27
No. 3, do do do	15 a 16
Smyrnia washed	16 a 22
do unwashed	8 a 14
Bengal unwashed	7 a 9
Buenos Ayres	8 a 20

—*Courier.*

FANEUIL HALL MARKET—Jan. 31.

WHOLESALE.			Eggs, doz.		00 a 23
Beef, fresh, lb.	7 a 12		Apples, barrel,	3 50 a 4 00	
Mutton, 1st qual.	6 a 10		Beans, bush.	1 50 a 1 75	
2d "	4 a 8		Peas, bushel,	0 00 a 0 00	
Lamb, lb.	3 a 7		Potatoes, barrel,	2 00 a 2 50	
Veal, lb.	4 a 8		Onions, bush.	75 a 0 00	
Pigs, roasting,	1 00 a 1 22		Honey in comb,	10 a 20	
Chickens, per lb.	10 a 14		SEED—RETAIL.		
Turkeys, per lb.	10 a 13		Clover, North. lb.	12½ a 00	
Geese, mongrel,	1 25 a 1 50		Southern,	8 a 9	
Pigeons, dozen,	1 00 a 1 25		White Dutch,	20 a 25	
Pork, per 100 lbs.	5 00 a 6 00		Lucerne, or French,	33	
Lard, best, pr. bbl.	6 75 a 7 00		Herdgrass, bush	3 50 a 0 00	
Western, keg,	7 00 a 7 25		Red Top, bushel,		
Butter, lump, lb.	20 a 25		Northern,	1 25 a 0 00	
do, firkin,	12 a 18		Southern,	00 a 0 00	
Cheese, new milk,	6 a 7		Orchard Grass,	— a 2 00	
do, four meal,	5 a 6		Fowl Meadow,	2 50 a 0 00	

Domestic Economy.

Washing-Liquor.

A correspondent who calls himself the "Washer-woman's Friend," says—"There is now washing-liquor sold in Sheffield at the most extortionate price—beautifully labelled;" but for the benefit of washerwomen, who are generally the really deserving poor, we will impart the wonderful secret, which has been obtained from head quarters, viz., Mr. Twelve-trees.—1 lb. of soda, $\frac{1}{2}$ lb. of lime, $\frac{1}{2}$ lb. soap. The soda and soap are boiled together, and the lime alone, in two quarts of water; and then, after being boiled, are used as required. This recipe can be as well manufactured by a poor washer woman as by a scientific chemist.—*Liverpool Standard*.

[Our lady readers will thank us for the following still more distinct recipe: Dissolve $\frac{1}{2}$ lb. of lime in boiling water, straining twice through a flannel bag; dissolve separately $\frac{1}{2}$ lb. of brown soap and $\frac{1}{2}$ lb. of soda—boil the three together. Put six gallons of water in the boiler, and when boiling, add the mixture. The linens, which must have been steeped in cold water for twelve hours, are wrung out, any stains rubbed with soap, and put into the boiler, where they must boil for thirty-five minutes. They are then drawn, (the liquor being preserved, as it can be used three times,) placed in a tub, and clear boiling water poured over them. Rub them out, rinse them well in cold water, and they are ready for drying. By this process two-thirds of the ordinary labor of washing is saved; bleaching is dispensed with entirely; the clothes are much cleaner, and are less worn than by the ordinary mode of washing, and the mixture in no way damages the fabric. Ere long that fruitful source of annoyance and discomfort, "the washing day," will, by the use of this mixture, come we are assured, to be reckoned among the things that were.]—*Greenock Advertiser*.

CORN STARCH—A NEW ARTICLE OF FOOD. Many of our readers are aware that the best and purest starch to be found is now manufactured in this country from Indian corn alone. Such is the well known "Pearl Starch" Manufactured by J. J. Wood, (late Clark and Wood) of Columbus, also the "Oswego Starch" in New York. It is manufactured by a peculiar process for which a patent was granted a few years ago; and of this we shall speak at another time; our object at present being to inform our housewife friends that this same corn starch is a very wholesome and delicious article of food; and dishes prepared of it are becoming highly popular among the families where known in this city, and also in New York. It is easily prepared and can be used in a great variety of ways. The following have been tried by some of our most skillful housewives and found to be excellent. We can testify from experience to the good quality of the recipes:

Corn Starch Puddings. Take six table spoonfuls of pure corn starch—add sufficient new milk just to dissolve it—then add three eggs and beat thoroughly

together; now have one quart of new milk, a little salted, and heat nearly to boiling, then pour in the mixture of starch and eggs, stir briskly and boil for three minutes, and it is ready for the table. For sauce, use cream and loaf sugar beaten together—or any other that may be preferred.—*Ohio Cultivator*.

RICE. It is a subject of wonder to many why the article 'rice,' which has for a long time been so extremely plentiful, and consequently cheap, does not enter into more general consumption in this country. I think the true answer is this:—'Because very few among us know how to prepare it for the table;' for not one cook in ten can ever plain boil it fit to be seen and eaten, and not one in twenty (strange as it may appear) can make a 'rice-pudding.' The first may be accomplished by using only so much water as the rice will absorb in boiling, by which each grain will be kept free and separated, and the mass not made into starch or paste, as is generally the case; and the second can be perfected by putting one teacupful of rice to one quart of milk, adding sugar to suit the taste, a small quantity of chopped suet, butter, or dripping, grating a little nutmeg on the top, and baking as usual. This will be found one of the cheapest, lightest, and most delicious puddings that can be eaten, and very superior to a 'rice-pudding,' as generally made with eggs, &c., which not only add to its expense, but destroy the character of the dish.—*London Daily News*.

TO MAKE APPLES. Take sour apples, those of a keen acid, and to every square tin filled with them, pour over a tea-cup full of water, and one tea-cup full of sugar. Bake them slowly till done. Eat them with cream and the juice which cooks from them. Nobody knows much of baked apples who has not eaten them in this way. No quince, pear, peach, or plum preserves are equal to this simple dessert.—*N. E. Farmer*.

Mr. Hill, editor of the Farmers' Monthly Visitor, planted last fall an orchard of 400 apple trees, mostly Baldwins, Rhode Island Greenings and Roxbury Russets.

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by BISHOP & TRACY,

and sent to subscribers on the following TERMS:

For a single copy, - - - - -	50 cents.
5 copies, sent to one address, - -	2 00
10 " " " " " " " " " " " "	3 00
16 " " " " " " " " " " " "	4 00

And any greater number at the rate last named, or 25 cents per copy.

☞ Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

SCHOOL JOURNAL AND VERMONT AGRICULTURIST.

Vol. III.

WINDSOR, VT., MARCH, 1850.

No. 11.

THE SCHOOL JOURNAL.

For the School Journal.

To the Parents, Guardians, and Friends

OF THE NINETY-EIGHT THOUSAND CHILDREN
IN VERMONT, WHO ARE GROWING UP TO BE
THE CITIZENS OF THE STATE AND OF OUR
COMMON COUNTRY:

The time is just at hand when, in the several towns in the State, you will be required to choose superintendents of your schools; and we would urgently and earnestly appeal to you on that occasion, not only to select the right kind of men for that office, but to give them such directions and encouragement as shall prompt them to the zealous, efficient and faithful discharge of their duty. Our county superintendency having been abolished, the office of town superintendent will now assume a higher responsibility and importance than have hitherto belonged to it.

In the first place the duty of examining teachers will devolve solely on your town superintendents.—This is a work which you, as individuals, would doubtless be reluctant to engage in, even if you possessed essentially the requisite qualifications. Besides, there is a certain tact and skill acquired by experience in this, no less than in any other kind of business, which you could not expect to exercise, if you were to attempt to distribute the labor of examining your teachers among yourselves,—each performing the service once, perhaps in a series of years. If you have a delicate piece of work to be done, you apply to one who has gained skill in such work by practice. *Division of labor*.—each steadily pursuing a particular employment, and thus acquiring an ability to perform his work skillfully and well, is a characteristic of the civilized state, and the most effective means of advancing civilization. And this is true not only in regard to the mechanic arts, but all the employments and pursuits that look to the promotion of a people's welfare.

Nor is this duty of examining teachers one of trifling importance. Without a thorough system of examination, many who are wholly incompetent and unfit for their high and holy work, will be likely to find a place in your schools as teachers; many who, if they do not positively lead your children into error and corrupt their morals, will yet fail to rouse their energies, to awaken their interest in study, and ac-

cure their proper advancement. And if the precious season of their early life be allowed to pass away unimproved, they will sustain a loss which the future, however propitious, can never fully repair. For the wasted opportunities of childhood may be mourned over, but they will not return.

But failure from incompetency in the teacher is not the only evil to be feared. He may do far worse than fail. He may inculcate error, or exert a demoralizing influence. And remember that the impressions and effects thus produced are of no transient duration.—The teacher is engaged in rearing a structure "whose base is on the earth,—whose cap stone is in the skies!" He is inscribing on the mind and soul of those entrusted to his care, a tracery which time may not alter,—characters that men and angels must survey. His instructions and influence will tell upon the character and destiny of those you love, for time and for eternity.

In the second place, the duty of visiting your schools will devolve wholly on your town superintendents. Doubtless one of the most important ends to be answered by this visiting of schools, is to keep alive in the teacher a sense of his responsibility, and show him that some solicitude is felt for his success, and to awaken in your children a new and livelier interest in their pursuits by the assurance that their progress in learning is regarded as a matter of so much importance as to be made the object of your own and the public attention. To such sympathy both teacher and pupils are fairly entitled, and they need it to encourage and animate them in their work. From this view of the nature and leading purpose of the duty in question, it might be concluded that you could perform it to better advantage than you could that of examining teachers. But could we rely upon you to attend to it amidst the engrossing pursuits of your business? Would you perform the duty, *promptly, thoroughly, and faithfully*? We indeed hope,—we would entreat you,—that you will not entirely neglect the duty as an *individual and personal* one. Yet you need not fear that the services of your superintendents, in his way, will be superfluous or useless.

Again and lastly, the duty of recommending the books to be used in your schools will also devolve entirely upon these officers. You need some arrangement to protect yourselves against the fluctuations and changes in school books which must unavoidably

result if this matter be left without any systematic regulation. You want well informed, discreet and stable men to advise on the subject, so that you may feel secure not only that your children have suitable books, but that no caprice from any quarter shall, on the one hand compel you to purchase anew at the commencement of each successive school, (if not of- tener,) or, on the other hand, expose you to have the usefulness of your schools greatly impaired,—the labors of your teacher essentially embarrassed and the progress of your children seriously retarded,—by a multiplicity of text books, and a consequent multiplicity of classes. The recommendations of judicious superintendents will tend to establish a system which you can rely upon to be as permanent as the nature of the case will admit, and which you can conform to with far less embarrassment and expense than you would be subjected to if no stable system were adopted,—to say nothing of the difference in the progress which your children would make in their studies.

In view then of the various important duties which are to be performed by your superintendents may we not hope that you will regard the proper selection of them a matter of serious moment! We would urge you to select men of competent scholarship, the prudent and judicious, those who feel an interest in the cause of our common schools, and who may be relied upon to be active and in earnest in discharging the duties of their trust. And especially select such as will afford you the best possible security that the teachers they approve shall be of such a character as their high vocation demands. For we would again urge you to guard well,—to use every precaution in your power,—that those in whom are garnered up your dearest and fondest hopes be not entrusted to the charge of an incompetent, unfaithful and unworthy teacher. Employ, if you please, a novice to superintend a business in which you have invested all your capital; give, if you will, the pleading and defence of a cause in which your whole worldly wealth may be involved to a fourth-rate lawyer; and commit, if you choose, the care of your health and life, when disease has assailed you and death stares you in the face, to an ignorant quack; but do not, O do not entrust the education of your children,—the unfolding of their immortal minds, and the formation of that character on which hangs their eternal destiny,—to those who would go to work at random upon materials so priceless—thoughtless and careless, it may be, of the final results of their labors! The former errors will, it may be, lead to a ruined fortune, or the putting short of your years on earth. But the ruined fortune perhaps may be retrieved, and your life at farthest must reach its close. But the last error,—that which involves the miseducation of your children,—is one that concerns more than worldly wealth or a fleeting existence here, and involves a loss which neither time nor eternity can repair—a fatal and irretrievable ruin!

It is not enough, however, for you simply to select your best and worthiest men for superintendents.—When this has been done they should be given to understand that you expect them to do their duty. This

may be done by your giving them proper directions and the assurance of a suitable compensation for their labors.

It was the intention of the undersigned only to call your attention, at this time, to the duty that pertains to the election of your town superintendents. But now that we are in communication with you, allow us to add a few words further. When you have performed the duty already contemplated, you still are not,—cannot be, discharged from all further obligation or concern in regard to your schools. You have yet other personal and individual duties to perform. You need to cooperate with your superintendents and with your teachers in every possible manner.

We trust that Institutes will be brought within reach of all our teachers in the course of the current year. These are schools designed to impress upon teachers a deeper sense of the responsibility and importance of their work; to impart to them a knowledge of the best methods of teaching and the best mode of adapting their instructions to the different ages and capacities of children; and, generally, to ensure to them a higher skill and more full success in a labor fraught with so momentous consequences.—But without a general system of cooperation on your part, teachers, however well qualified, skillful and faithful, must come far short of accomplishing the good they might otherwise do.

We cannot here enter into the details of your personal duties in relation to this matter, but we strongly and earnestly entreat you to turn your attention to the subject and study those duties for yourselves. Our schools need improving. They should ensure to our children higher intelligence,—purer virtue,—greater usefulness. The improvement demanded will require your efforts; but no great good is obtained at a cheaper rate. And, in closing, we would appeal to your regard for the honor and prosperity of the State, which we doubt not you are proud to call your own; to your concern for the best welfare of society; to the interest you feel in the respectability, the usefulness and happiness of your children;—or, if you have not children of your own, we commend to your special regard the State's whole NINETY-EIGHT THOUSAND "BUDS OF PROMISE";—and ask you, *respectfully*, but with the expectation that the request will be heeded, that you will employ your best energies,—your most earnest, faithful and persevering efforts,—to sustain and build up our COMMON SCHOOLS.

H. EATON, *State Sup't.*

Middlebury, Feb. 18, 1850.

Leaving School too Soon.

In Governor EATON's Third Report as State Superintendent, there is an estimate in regard to the condition of education in Vermont, based upon the supposition that all between the ages of 4 and 18 ought to attend school. We do not think the fact that the number of such who attend school falls some thousands short of the whole number, justifies the inference that those thousands are growing up uneducated. We know some who attend no school, but are well instructed at home. We know more who,

at the age of 12 or 14, and even younger, are better versed in common school studies than many teachers of common schools; and certainly such ought not to be employed upon those studies till they are 18, just for the sake of going to school. If no better arrangement can be made, they must "go ahead" at home.

We agree entirely, however, in the opinion, that as a general rule, the school age ought to extend to 18. There were some good remarks on this subject in a late number of this paper (May, p. 5) by a correspondent. He, however, had his eye particularly upon the girls. Very well,—the girls ought to seize eagerly, every moment of school time that they can command, till they get at least pretty far along among the higher numbers of the teens. But we do not, in the range of our observation, find the delinquency any greater on that side than the other; nor, indeed, so great in summer. We see boys, with good schools at hand, wasting their time as if forbidden by some stern law, to learn anything but how to kill time, except when the ground is covered with snow. It is not so, we are aware, among the farmers. Their boys have something to do, and are actually *learning*—taking important and valuable lessons in the fields. But among village boys—alas! for the lost months, the wasted opportunities, the ruined habits!

The Farm, the Shop, and the School.

BY PROF. STEPHEN CHASE.

The Farm, the Shop, and the School, labor under a common difficulty—the want of a proper *method*—of suitable skill in management. The importance of such skill is, however, more generally and readily admitted in respect to the shop, than in respect to the school or the farm. Most men, (we cannot say all,) require some degree of skill in the maker of their coats and boots, the shoer of their horses, and the builder of their plows and wheelbarrows. Moreover, many people, perhaps most, admit the possibility of increased skill in the mechanic, and in corresponding improvement in the results of his labors.

In the management of the school and the farm, however, very many seem to attach far less importance to skill, and to entertain less hope of improvement. In their estimation, a school is a school, and a farm is a farm. If, from the time the children are four till they are sixteen years old, they are, for a suitable proportion of each year, shut up six hours a day in the school-house, and, especially, if they are made to sit still there, their education is supposed to be fully provided for.

The teacher, (if we can call him teacher,) is usually, it is true, expected to know certain things which his pupils are required to learn. But very few parents ever require or expect any particular skill in communicating that knowledge, or seem to suppose that there can be any choice of methods of presenting a subject to the mind of a pupil, or of interesting him in its study. Much less do they suppose that increased attention to the science of teaching has led to new methods of teaching, far superior to the methods of teaching the same subjects, fifty years ago. In short, they do not believe that there is a *science* in teaching.

There are multitudes, again, to whom it has never occurred that the moral and intellectual character of their children is, in any degree, affected by comfortable seats, pure air, and proper temperature within the building; or by a pleasant play-ground, and the conveniences of civilized life without.

Similar remarks apply to the farm. People do not acknowledge a *science* of farming. They regard a good crop as the result of chance; or, at best, if they admit the value of experience, they seem not to suppose that the experience of one man can be made profitable to his neighbor, and to the whole community; and, so, that the experience of the whole community may be made to benefit every individual.

Many are ignorant of the existence of improvements in the implements of husbandry, and in the methods of cultivation; while others, not entirely ignorant of their existence, know too little of their value to admit that they are improvements.

Again, farmers find their crops diminish from year to year, and charge the diminution to a permanent exhaustion of the soil, or to some other cause beyond their control, when, frequently, the difficulty is entirely within the control of scientific agriculture.

Now it should never be forgotten that the best methods of both teaching and farming—of "the cultivation of the mind and the soil"—are proper subjects of investigation and scientific research.—To encourage and aid such investigation, and to spread its results before the community, is the object of an educational and agricultural journal. Thus the experience of one becomes the experience of all; and the experience of all is concentrated into the mind of each individual, so that he gains more experience, possibly, from reading a single paper, than he could in a whole life-time of unaided experiments.

The Farm, the Shop, and the School, are the boast and glory of our State, and of New England; and justly so—they are, under the guidance of Christianity, the fountains of virtue, intelligence, and wealth. Let intelligence and wealth combine their energies to improve and render more prolific the powers from which they spring. Intelligence and wealth are the offspring—let them, as dutiful children, cherish their parents, and enable them to perpetuate, to extend more widely, and greatly to increase the richest blessings of civilization.—*Granite Farmer.*

Algebraic Paradox.

Let $a = x$. Then multiplying both sides of the equation by x , we have $ax = x^2$. Then adding $-a^2$ to each side of this equation $ax - a^2 = x^2 - a^2$, that is, separating into factors $a(x - a) = (x + a)(x - a)$. Then dividing this equation by $(x - a)$ we have $a = x + a$. But $x = a$, and therefore $a = a + a$, i.e. $a = 2a$ and $1 = 2$. Where is the fallacy?

Again. Let $a = 2$. Then multiplying by 2, $2a = 4$, adding $-a^2$, $2a - a^2 = 4 - a^2$. Resolving into factors, $(2 - a)a = (2 - a)(2 + a)$, divide by $2 - a$, $a = 2 + a$, $2 = 2 + 2 = 4$!—*Massachusetts Teacher.*

For the School Journal.

Rules in Orthography.

In looking over Webster's large Dictionary, a few days since, to ascertain the orthography of certain words, I found a uniformity in spelling that large class of words which end in *nt* and *nce*, which surprised me. I have often found it difficult to remember, when in the hurry of writing, the proper vowel to precede the *n*, in some words not in common use; and therefore I have thought that, if anything like a general rule could be given, which could not escape the memory, it might be of advantage to others, as it has been to myself. To show that there are not a few words with these terminations, I may remark that I found 130 under the letter *a*, and 116 under the letter *c*. &c.

The rule which is of almost universal application is this:—Words in *nt* or *nce*, of French derivation have *a* before those terminations; words of Latin derivation, if coming, as most do, from *verba*, follow the analogy of the pres. participles of those verbs—those from the Latin 1st having *a*, from the 2d and 3d *e*, and from the 4th *e* or *ie*; there are a few others derived from adjectives in *lentus*, as *pulverulent*, &c., all of which have *e*.

There are a few words with these terminations derived from English, Danish, or Italian roots, which cannot be subjected to any general rule. On looking the Dictionary through, however, I find but three or four per cent. which do not strictly conform to it.

It has often seemed to me desirable to have a rigid examination of each class of words effected, and its history brought distinctly before the minds of the pupils in our schools, in some such way as given above; for I am satisfied, by a somewhat lengthened experience in teaching, that no method is better calculated to fix in their minds the *orthography* of words, than to interest them in their *etymology*, *affinities*, &c.

As another instance, take the class whose termination is *ish*.

I find of these in Webster 43. 24 of them are derived from the 4th conj. of French verbs in *iz*—as *abolish*, *aboliz*; *finish*, *finiz*, &c. Seven come from Latin verbs. One, *replenish*, is from *replenez*, a Norman verb. One, *skirmish*, from *escarmanche*, a French noun. One or two from the Saxon, &c.—They are all but three or four, transitive, and all regular verbs.

After such a search among dictionaries, whether effected by teacher or scholar, although the latter would be better, I am sure his familiarity with that class would be very much greater than under any other method of teaching now in use amongst us. Will teachers try it! FITZ JAMES.

Wouldn't you call a man a fool, who should spend all his time in fishing up oysters, with the expectation of finding a pearl? But is he really more unwise than hundreds, who, with their hands in their pockets, and cigars in their mouths, are waiting for something to turn up or turn over, that will throw them at once into a business and a fortune? They

may wait until doomsday, and longer, if possible, before their fond expectations are realized. If there is a kind of life that we more than abominate, it is a lingering, waiting, lazy, dreamy sort of existence, over which angels and true men weep with unfeigned sorrow.

Schools in Franklin County in 1850.

No. 46. House of brick,—large, convenient, and very cleanly. Number of scholars about fifty, neatly dressed, well behaved, and making rapid progress.—That quiet, cheerful appearance, which springs not from fear or stupidity, but from a consciousness of improvement, pervaded the school. Reading lessons well studied by the scholars, and read, *while standing on the floor*, with interest and care. They were closely questioned as to what they had read, at the close of the exercise. Towne's Readers are in use here, and the teacher expressed himself strongly in their favor. Blackboard used much in mathematical recitations;—why should it not also be used for sketching maps of countries? A fine class of twenty boys and girls recited in Geography;—and a spelling class of *twenty-six*, of the age of twelve and thirteen took its place on the floor, as the Number of each one was called by the one at the head. Teacher well educated and experienced,—active, commanding, with a nice regard for order and completeness in everything. The patrons of this school are much interested in school-matters, and obtain good teachers by paying fair wages.

No. 48. A new brick house, of the better sort, with no door-yard but the street, and no wood shed but the clouds,—of course. School not large, but orderly, industrious, and making fair progress. Has been much injured during the present winter, because the laws and maudlin tenderness of the nursery could not be exercised in the school-room; and nothing but judicious firmness, and better judgment on the part of the teacher and majority of the parents in the district, prevented the destruction of a good school.—Blackboard not used, because it is still a mooted question in this district whether the teacher or the parents shall furnish chalk!

No. 49. House well enough on the outside and spacious and well ventilated within; but a long, low, jack-knifed desk extended around three sides of the room, having the closest resemblance to a *manger*; but the scholars have had sufficient regard to cleanliness to wash their house *twice* during the winter.—This may appear incredible to many. School well governed and scholars ambitious to learn. A record of the attendance of the scholars is kept; six or eight scholars have not been absent once during the winter. In Geography, Arithmetic, and Philosophy the scholars showed themselves good proficient. In Grammar and Reading a little backward. Teacher young, but well educated, and not afraid of doing *over-work*.

No. 50. House nearly new and very comfortable, but filthy. No out-house of any kind. Scholars astonished at the sight of a visitor, and disagreeably curious,—but quiet and rather studious. Writing well attended to, and Arithmetic well and thoroughly

taught. Blackboard used sometimes. Recitations in Grammar and in Parsing very poorly done. Teacher governs well and kindly, but a little old-fashioned, and lacking somewhat in *enterprise*.

No. 51. House old-fashioned, but comfortable and very clean. Teacher a female,—intelligent, industrious, skillful, and experienced. Number of scholars about thirty,—some of them well advanced, and all very studious. No whispering, and everything is done *orderly and thoroughly*. Blackboard used much. Bible read at the opening of the school,—which ought never to be omitted. Reading and other lessons reviewed daily by means of questions. The plan of review and *thorough* questioning as adopted here, cannot be too highly recommended. If the scholar appears on the floor without a lesson, he remains on the spot till he has a lesson. This school is a *school* and the teacher is a *teacher*.

No. 52. House well enough for a small school, but crowded almost to suffocation. Every seat, narrow even for two scholars, is made to hold three and sometimes four scholars. The want of room and good air creates an uneasiness and disquiet that hinders study, and injures the progress of the school.—Nothing is plainer than that this school, not the district, should be divided, and the larger and more advanced scholars taught by themselves, and always by a female. Superintendent politely introduced to the school by the teacher. As might be expected, the school is noisy. History, Philosophy and Watts on the Mind are here taught. Blackboard not used for two reasons, 1st, because there is none furnished by the district, and 2d, because there is literally no place large enough to accommodate one more than two feet square. Classes large and rather disorderly. The multiplication table is recited by twenty or more, in concert, each one *beating time*.

No. 53. House new, of brick, well constructed and located in a pleasant place. A fence, and a wood-house only are wanting. Number of scholars about thirty-five, well behaved and orderly. Writing well attended to,—blackboard used much. Scholars well advanced in arithmetic, and reading; but a class in history, that will make the "Green Mountain Boys" inhabitants of Massachusetts cannot be called a very good one. A record of the attendance and progress of the scholars is kept. Teacher experienced, enterprising and having the good-will of his scholars,—is seldom obliged to resort to the rod or harsh words.

No. 55. Very short,—very narrow, and full seven feet high. Outside blackened by age and storm,—inside made darkly sallow by age and filth. Nothing could be more inconvenient than the few skeleton desks and seats that remain. Room hot and filthy. In a corner stood the stump of a birch broom, and it must have been a long time since it was removed from its standing place. The school is supported "on the scholar." When will this relic of barbarism be abolished entirely? School small, not noisy, but idle, and, with two or three exceptions, backward. The teacher allows the most reprehensible, silly, and unnecessary practice of seating the larger scholars of both sexes together,—placing alternately a boy and a

girl! Do the parents know of this,—and do they approve of it? Dan Cupid was evidently the presiding genius here,—a worse curse to a school than measles or whooping-cough. Sometimes a lad of sixteen has, or can assume manliness enough to teach a school *tolerably* well. But when a teacher in a school-room allows the feelings, and adopts the manners of a mere boy, he is the occasion of much mischief, and degrades, not amuses, his scholars by his puerility.

C. H. HAYDEN.

An Exercise upon Adverbs.

The following supposes the pupil to have entered upon the study of the nature and use of adverbs.—Common conversation and the newspapers of the day, furnish an incredible number of sentences in which the modifications by the adverbs are grossly inappropriate. It does not seem to have occurred to some writers, that the coupling together of certain verbs and adverbs is as rigidly forbidden by the laws of literary criticism as the yoking together of an ox and an ass was by the law of Moses. Were one disposed to collect these slipshod productions, he would be astonished to find what strange, incongruous, degenerate imps are daily palmed off as the genuine descendants of our fair mother tongue. How common are such ill compounded expressions as,—*"She sings grandly," "She plays magnificently," "She dances splendidly," "The rose smells beautifully,"* etc., etc. To correct, or rather to prevent these improprieties in the use of language, I have found the following exercise a very useful one. It is designed to accomplish two purposes: to secure a wide command of the modifying words and phrases of the language, and to accustom the pupil to distinguish and use those words which exactly embody his ideas. Assign to the class some verb, as,—walks, dances, studies, etc., and then ask from each one, some adverbs properly modifying it, thus,—Dances; *gracefully, easily, elegantly, carefully, lightly, excellently, slowly, well, madly, noiselessly, wildly, heavily, vigorously, frantically, awkwardly, clownishly, poorly, fantastically, actively, sluggishly, perseveringly, spitefully, busily, gayly, gleefully, gently, furiously, joyously, cautiously, joyfully, firmly, proudly, clumsily, artlessly, comically, frequently, commendably, indefatigably, modestly, etc.* This exercise is of great value as a preparation for original composition. The slate may be used with great advantage.—*School Friend*.

BEAT THIS IF YOU CAN. We saw by the register of the Medford High School the other day, that during a term of four months, with ninety scholars, there were but sixty-one tardinesses in all! And there were more than sixty scholars not tardy once during that long, winter, snow-drifting term. What will astonish the *slack* ones most, is the fact that no scholar is required by the teacher to bring an excuse for being tardy. The common practice is not in operation—the common rule not in force. This state of things was not brought about by the use of that rule. The teacher went to work with those scholars, and con-

vinced them of the evils of being tardy, and made it *disreputable* for a scholar to be behind time. That is the feeling now. No scholar can come in late without a blush on his cheek, and his footfalls ringing in his ears so that he hardly knows the way to his seat. "Shame, and confusion of face," once felt by scholars for being tardy in any school, and there is no need of asking excuses from parents.—*Boston Paper*.

Schools in Franklin County.

Mr. HAYDEN, County Superintendent, closes his Notes of Schools in Franklin County, (published in the *Messenger*,) with a notice of a good school house and good school, and two or three general remarks, as follows:

No. 67. This house is in the town of Enosburgh, in a picturesque valley close under the Green Mountains. It is large, and high,—painted white, with a cupola on it. The hall or entry is large and convenient. The desks accommodate but two scholars each, and all face the teacher's stand which is on an elevated platform opposite the door, and which extends entirely across the room. The walls are high and white. The windows are shaded with curtains, and there is a ventilator which is easily graduated by a cord. Mitchell's Outline Maps were suspended on the walls, which gave a very different appearance to the room than the chalk marks, charcoal sketches, shawls, cloaks, bonnets &c., which usually adorn a school room. The house is easily and cheaply warmed by a furnace in the basement, where also is kept dry, hard wood sufficient for two years' consumption. This house was built about eight years ago at a cost less than \$400 00.

Number of scholars about forty, bright, active, orderly, and well advanced in their studies. An intelligent and skillful female teacher, who spoke pleasantly and taught skillfully. Scholars rose on the entrance of strangers, and showed no rude curiosity or lack of good manners. This school has been visited frequently by the patrons of the school, and the good effects were clearly manifest. There has been uncommon interest manifested by most of the inhabitants of this district, in the common school, and the result has been, that a better disciplined, or better educated school is rarely found.

—About *one fourth* of the school houses in the County are good houses. Another fourth are neither good or bad, and full *one half* are *uncomfortably bad*—not to say too bad for use.

Of the Teachers, *one half* are such as ought to satisfy all, and would, with the right kind and amount of interest and encouragement on the part of the people, make common schools what they ought to be. About *one fourth* part are less than eighteen years of age,—are hired to teach at a price varying from \$9 to \$14 per month.

By the late act of our Legislature, the examination of teachers,—visitation of schools,—and the selection of text-books, come immediately and entirely under the direction and supervision of each town, on the first day of March. The importance of selecting, at the approaching March meeting, a well qualified

Town Superintendent,—one who will work without fear or favor of neighborhood opinions,—one who shall coöperate with the teachers of his particular town in reference to the various school interests,—one, whom the people will *allow* to do something, and not enjoin a state of "masterly inactivity,"—and will allow him a compensation of \$1 00 *per diem*,—the importance of selecting such a superintendent cannot be too strongly urged. Unless this is done, our schools are sure to suffer still more, and pass through darker times than they have ever passed through, before a hearty, earnest effort will be put forth by the people to make Common Schools what they ought to be.

Notes of Schools.

BY REV. J. TUFTS.

A Good School near being lost.

No. 143. The upper school of 40 scholars, quite still, orderly and studious; several uncommonly intelligent children in the school, and the class in Geography bore a better examination and answered more general questions than the majority of teachers. The vowels exploded with great clearness and force in concert. No loud study or communication between the scholars. A very thorough, quiet, systematic, skillful, experienced male teacher. Many parents and children bolted at first, threatening to turn him off, but the Committee upheld the teacher, and it is now a first-rate school; but would probably have been a total failure, if a few disaffected parents had been permitted to rule and the Committee had been afraid to stand by the teacher. Parents accustomed, at first, to send word to their teacher that their children must do so and so, or they should take them out of school.—When I saw how fast the scholars here were improving, I could not but wonder that parents should be so short-sighted and foolish as to take a miff at nothing, and keep their children from school, punishing themselves to punish the teacher.

An Example of Discipline.

No. 156. A school of thirty scholars, ambitious, and well behaved, the large scholars setting an example of obedience and good behavior. A good class in Physiology and Grammar. The teacher, junior from Amherst College, young, but very quick, prompt, decided, energetic, with good nature and tact to teach, drill, and wake up the mind. The teacher in a case of discipline, after punishing a certain boy, who refused to yield, as much as he dared to, sent for his father. The father came with a bundle of sticks, and after hearing the case, instead of siding with the boy, or telling the teacher he was not judicious, used the twigs on the boy, till he was willing to surrender, and the boy is now one of the best in school.

Treatment of Teachers.

No. 154. The first teacher, a stranger from Mass., from what I hear, is a thorough scholar, an experienced and successful teacher, but some of the scholars took a miff, thought the teacher was not like the former ones, (as though good teachers must all be alike,) and then there was the usual uneasiness, fault-

finding, whisperings, misrepresentations, and magnifying of little things; while the Committee and parents instead of promptly frowning down the first symptoms of rebellion, *hesitated*, till the young lady, feeling that she was not properly sustained, went off and left them, though against the wishes of the district. The parents and scholars here have had a good name, but they seem in this case to have acted inconsistently with their general character, as good people frequently do. In the best of schools there is often a *crisis*, a turning point of obedience or rebellion, and then parents or the Committee turn the scale; if they sustain the teacher the school will do well, if not, it will be good for nothing, and that not through the fault of the teacher. When a female teacher is in charge of a winter school and fault-finding children or an offended parent undertake to put her down, respectable people do not discharge their duty by *taking no part*, by finding no fault, or by doing nothing, and "passing by on the other side."

A Model School.

No. 163. School of 70 scholars in one room under the care of two teachers, sisters, one of the teachers occupying a recitation room. The first appearance of the school shews order, system, interest, life, and delight in study. Classes in reading had made astonishing improvement since last summer, surpassing any reading I have heard in the County. In every exercise there was zeal, animation, attention and promptness; the minds of the scholars being in complete communication with the teachers. A few bright scholars did not answer all the questions to give credit to the school, but *all* the scholars, even the dullest, were wide awake, as indicated by their bright sparkling eyes, electrified countenances, animated voices, and prompt answers, appearing as much better than ordinary scholars as a company of well disciplined soldiers than raw militia or street loafers. The school had a good name, and I resolved, on visiting it, to *scrutinize closely*, and not praise because others did. I was, however, satisfied the teachers had not trained their scholars merely for *show* and display, but there had evidently been on the part of the teachers thorough drilling, untiring perseverance that never gives up till a thing *is done as it should be*; combined with zeal, tact and judgment, such as few teachers possess. The credit of the school does not belong to the teachers alone, but to teachers, parents, and scholars, and to the efficient committee men, who seem as devoted to the school as a *chivalrous knight to his lady love*.—There may be many teachers equally good in the County, whose scholars do not appear half so well, and these same teachers could no more accomplish what they have done here, in ordinary, stupid districts, than a goldsmith could manufacture a patent lever watch in a common blacksmith's shop.

We notice that very many of the Winter schools in Windham county are under the care of female teachers.

THE GREAT DISCOVERY OF SIR H. DAVY. When the friends of Sir Humphrey Davy were expressing

their high admiration of his valuable discoveries, he interrupted them with this extraordinary remark: "The greatest discovery that I have ever made, was the discovery of Dick Farraday"—a poor boy whom he picked up in a work shop, and whose after-life did credit to the philosopher's assertion.

Teachers who do not Read.

Who would have thought it—who would have dreamed that our children are the pupils of Teachers who do not read! But we must tell our story:—Our agent while canvassing Allegheny county, met with several teachers who refused to take the magazine, and assigned no other reason than *they did not read*. They had no time nor inclination to read after school hours. Alas! for that corner of the vineyard—alas, for those poor pupils. A teacher who does not and will not read! How can such a man teach! How can a meal chest hold out from which meal is daily taken, and none replaced! How can such teachers tell their pupils of the changes which are constantly taking place throughout the world! How can they keep pace with the improvements making in the art of teaching! How can they expect to give that variety which enlivens and cheers the school-room. A teacher who does not read, may do in a dearth; but we hope to see the day when the profession will not be disgraced by such. That man who will not exert himself to add to his stock of information, must be a self-satisfied mortal. Such a man never has taken a single drop from that inexhaustible fountain of knowledge to which he should lead his pupils, and from which, he should persuade them by all the powers of his ingenuity, to drink. No man who has tasted of this fountain can say, I am satisfied; it is so sweet, and so refreshing that he will drink on and on, looking forward to the time when he will be permitted to drink deeper and still deeper. A teacher who does not read, furooth! Away with such teachers; they are clogs to education, and destructive to our school system. They know nothing, and they wish to know nothing. Our money is thrown away on such pretenders.—*Pennsylvania Teacher's Magazine*.

MASSACHUSETTS. Still another measure for the promotion of education has received the sanction of the House of Representatives, as follows:—

RESOLVE authorizing the Board of Education to appoint Agents.

Resolved, That the Board of Education be, and they are, hereby authorized to appoint two or more suitable agents, to visit the town and school districts, in such parts of the commonwealth as may seem expedient to the Board, for the purpose of inquiring into the condition of the schools, lecturing upon subjects connected with education, and, in general, of giving and receiving information, in the same manner as the secretary of the Board would do if he were present; and that to defray the expense of the same, his excellency the governor, with the advice and consent of the council, is authorized to draw his warrant for a sum not exceeding two thousand dollars, to be charged upon the income of the school fund.

A Correct Taste in Children.

In many ways the mother can contribute to the formation of a correct taste. The first hymns she teaches to the lisping, and even the earliest notes she sings for its lullaby, should be chosen with care.—The pictures with which the walls of the nursery are adorned, should be selected with a studious and cultivated regard for real beauty. Likenesses of excellent men and women, whose names you would choose to have your children love, and whose virtues you would rejoice to see them imitate, are a very desirable ornament. A few elegant historical pictures, which might be used as introductions to general history, or which are calculated to inspire noble sentiments, would be found of great utility in every family able to have them. A few well finished landscape pieces would also tend to foster a love of nature in its cheerful and its sublime aspects.

There is a refining and effectual influence arising from a daily familiarity with the scenery of nature, whether it glow before us in its original loveliness, or in the representations of the genuine artist.

At proper times, as the mind becomes able to receive them, clear and definite instructions should be given as to the reason of their selection, the nature of their influence, and the general rules which should govern the exercise of the imagination. As the youth educated by such a process enters upon scenes and studies away from home, these early instructions, examples, and associations, will operate to elevate, restrain, and purify the mind, influencing his course of reading, his companionship, and his present character.—*Farmer and Mechanic.*

For the School Journal.

Properties of Square Numbers.

The article in your January number suggests to my mind a few curious properties of square numbers which I have not seen noticed any where, and which may therefore interest your readers.

1. The squares of the natural numbers increase regularly by an addition of the odd numbers in regular succession. For instance:

Roots.	Squares.	Increments.
0	0	0
1	1	1
2	4	2
3	9	5
4	16	7
5	25	9
6	36	11
7	49	13
8	64	15
9	81	17
10	100	19

and so on to infinity.

2. Each square is formed by the addition of its own increment to the sum of the preceding increments. Thus the square of 6 is equal to the sum of the increments to 11 inclusive; a principle which holds good with respect to all other squares.

3. Every square is composed of the sum of as many odd numbers, taken in regular succession from 1 upwards, as its root contains units. For instance, the

square of 15 is equal to the sum of the first 15 odd numbers; and a similar remark applies to the square of any number whatever.

4. Every increment is composed of the root of the square to which it belongs, plus the root of the square preceding. Thus the increment of the square number 16 consists of its root, 4, and the root of the square preceding 3=7. A knowledge of this fact enables us to commence a list of squares where we please. It also enables us mentally to calculate a square by the aid of easy numbers. Thus, suppose we wish to know the square of 39, we take the square of 40=1600, and taking from it its increment 40+39=79 gives 1521 as the square of 39.

I close with a few exercises for your younger readers. They may be proved by evolution.

1. Given the square of 45=2025, to find the square of 44 by subtraction, and that of 46 by addition.

2. Given the square of 60=3600, to find the squares of 59 and 61 by subtraction and addition.

3. Find the square of 99 by subtraction from the square of 100.

The object of such exercises as these is not so much practical results as mental development.

P.

For the School Journal.

Solution of Proposition in No. 10.

It costs 75 cents per rod to build one end of the wall, and \$1.25 per rod to build the other. But how far does each end extend? Evidently, to the centre, or 50 rods. N.B. It is not an indefinite part of the wall that is built for 75 cents and \$1.25 per rod, but one end for 75 cents and the other end for \$1.25. Each is to receive \$50. Then, $50 \div \$1.25 = 40$, the number of rods B. will build, leaving 10 rods more to be built: at \$1.25 per rod. A. builds 50 rods at 75 cents per rod, = \$37.50, and then builds the 10 rods on the other division at \$1.25 per rod, = \$12.50, and \$37.50 + \$12.50 = \$50.00.

I suggest that the proposition should read,—B. agrees to build on the other end, instead of "B. agrees to build the other end." [Right.] S. K.

[It will be noticed that S. K. assumes what the propounder of the question did not say. Is it right? Ems.]

PROPOSITION.

A. and B. agree to dig 100 rods of ditch for \$100, each to receive \$50. But as B's part is harder to dig, he is to receive one shilling per rod more than A. How many rods must each dig, and how much will they receive per rod?

E. Randolph, Feb. 20, 1850.

S. K.

Experiments recently made in the Cincinnati Observatory by Prof. Mitchel, by means of the magnetic clock, have ascertained the velocity of electricity upon the telegraph to be 28,524 miles per second.

The free school law of Louisiana is working well. The State is divided into 692 districts; 618 have schools, attended by 22,000 children. The fund is only half as large as it should be, and the Governor recommends its increase.

THE AGRICULTURIST.

Shall this Paper be continued?

After corresponding with the gentlemen principally interested in getting up and sustaining the *School Journal and Vermont Agriculturist*, we deem it proper to state that we shall not continue its publication after the present volume, which ends with the next number, unless a general movement shall be made in its behalf. We are not led to this conclusion from any want of *general* interest in the publication. The public expressions of approbation have been as favorable as we could wish; but these can never sustain a publication of this kind. If one is to live in the State, there must be in the several Counties such a *practical* interest in its favor as will give it a *general* circulation. Such an interest has not generally existed. J. P. Fairbanks, Esq., of St. Johnsbury, by whose counsel and aid the paper was started, has taken each year, 1000 copies, paying the full price for them, and distributing them in Caledonia, Orleans and Essex counties, at an expense as we learn, of some 75 or 100 dollars per year; and he still expresses a willingness to expend from 50 to 75 dollars per year in its support. Aside from this aid, the paper has taken its chance in the State. Some individuals have done good service in its behalf, but this has not been sufficiently general to give it an adequate support. At the present low price of the paper—lower than that of any other of the kind in New England,—a circulation of 3,000 copies is necessary to sustain it,—which would give to each county, not counting Essex and Grand Isle, 250 copies. If the friends of education will guarantee us that number of subscribers, we will go on with the publication; otherwise we must stop. We make this statement at the present time that the friends of the enterprise may have the matter before them in season to give it due consideration.

It has been found necessary, in most cases where papers have been commenced at so low a price, to make a change in that respect, advancing from 50 cents to a dollar, with the terms to clubs in proportion. This enables the publisher to pay for the trouble of circulating his paper,—which our price does not. This was probably an original error in the plan; since there are not to be found in all the towns persons who are willing to work gratuitously, and provision should therefore have been made to pay for all needful work.

Our conviction that a paper of this kind is needed in Vermont, is certainly not less decided than it was three years ago. On the contrary, circumstances are continually urging upon us new efforts to make the press useful in the departments of education and agriculture. We now enter upon a new arrangement in regard to our schools; which circumstance, with the awakened interest and decided progress of the last three years, seems to forbid the withdrawal, from the field of labor, of such an agency as this.

Agriculture, too, demands increased attention. An excellent monthly agricultural paper has long been published in New Hampshire, and we have just re-

ceived the first number of a weekly one, commenced under the patronage of the State Agricultural Society, and devoted partly to education. Cannot we have, by some means, a similar union of effort in Vermont? We earnestly hope that we may,—whether this journal shall be the basis of it or not.

Dr. Hayes on the Potato Rot.

The following paper was read at a late Legislative Agricultural meeting in Boston:

On a method for protecting potatoes, after they have been harvested, from the further spreading of the potato disease.

We are indebted to J. E. Teschemacher, Esq., for the first demonstration of the causes of the present destructive disease in the potato, being a fungus growth. The subsequent inquiries, up to the latest observations, have only slightly modified the conclusions arrived at in this country, by substituting for the changes produced by the vegetating fungus, those induced by the decay of that growth.

The rapid decay which continues after the roots have been removed from the soil, is of the most remarkable character, and, aside from its economical bearing, is a subject of scientific importance. During the last season, I made trial of some chemical agents which specially arrest all vegetation, hoping to discover an application which would enable us to preserve the diseased potatoes from further changes. Early in the course of the experiments, it was noticed that a reduction of temperature by exposure to cold air, greatly diminished the rapidity of decay, while a slight increase of temperature hastened it; moisture being present or not.

Heat in a moist atmosphere increased the destruction, and samples which had been cooled, and thereby partly protected, readily passed through all the changes when again exposed to warm and humid air. After using several substances by direct contact with diseased parts of potatoes, I soon found that the mixture of sulphurous acid, nitrogen and common air, such as exists when sulphur is burnt in closed vessels, would prevent the further progress of the disease in tubers already affected, and when exposed in contact with tubers passing through all stages of the disease, no further change in the prepared ones was induced.

The trials were varied, and the uniformity of the results has led me to conclude that the fumes of burning sulphur, flowing in contact with potatoes partly diseased, will arrest the further progress of the disease, and prevent decay. It is proper that this conclusion should be received as an expression of fact, under the circumstances of experiments on a small scale, and with no more than two varieties of potatoes; but I confidently expect that the importance of the application will be seen in the largest exhibition of its effects.

The practical use of the sulphurous acid gas is very simple and not expensive. Crude sulphur, inflamed in a shallow cast-iron vessel, or an earthen pot, furnishes the fumes, which may be led by wooden pipes to the lower part of bins filled with roots, until the unoccupied space is filled with them. As

the fumes cool, they become heavier than air, and will then enter every interstice. By placing a pot of burning sulphur in an empty barrel, and inverting over it a barrel filled with potatoes, having a light rack in place of a head, the fumes will slowly arise within and impregnate the mass; the barrel and contents being then removed, and the head replaced, the exposure may be considered as ample. Where the quantity is large, it would be more economical to leave a space vacant below the loose floor on which they repose, and introduce these fumes until every part of the heap of potatoes has received a share.

It should be remembered that this application will injure if not destroy the vegetating power of the tubers, and that although this result may be highly desirable for all that are preserved for food, those intended for seed should not be so treated.

A. A. HAYES, M. D., *State Assayer.*

Gilmore's Patent Apiary.

Mr. A. Gilmore, of Kennebec county, Maine, has taken out a Patent for a new method of managing Bees, which is represented as securing very remarkable results. He aims,—

1. To secure a colony of great strength—to put together an immense working power.
2. To direct the operations of the workers to the point where they will be most advantageous, from time to time.
3. To have the breeding done in comb not too old, and that without either killing the bees or allowing them to swarm.
4. To furnish abundant materials, so that the bees will work in storing up honey in boxes through the whole season.

The results are stated as follows:—

“WAYNE, November 16, 1849.

To whom it may concern:

We hereby certify that we have examined the principle of managing Bees, invented and adopted by Mr. Arza Gilmore, of Wayne, Kennebec county, Maine, for which he has obtained a patent. We have examined the product obtained from one hive in his House during the season of 1849. The hive was placed in the upper chamber, and put in connexion with one hive only below. They filled first their own hive, and then the hive below. In addition to this they worked in twenty-six boxes attached to said hives, and tumblers on the ends. They filled twenty of the boxes full, and six of them half full. They filled sixty tumblers full, with the exception of ten that were not quite full.

The full boxes sold readily for one dollar and twenty-five cents each.

NAPOLEON B. HUNTON, (*Rep. to Legislature.*)

N. H. CAREY, (*One of the Selectmen of Wayne.*)

HUMPHREY HIGHT.

C. C. WHITNEY, (*Methodist Clergyman.*)”

“Extract from the Report of the Committee of the Kennebec County Agricultural Society, on Hon-

ey, &c., &c., at their Cattle Show and Fair, at Lowell Cross Roads, in October, 1848.

There were two samples of Honey presented.—We found them both genuine articles—in appearance and taste, highly satisfactory. We could find no statement accompanying No. 62, (L. Guild, Sidney) we had not, therefore, the evidence required of the quantity produced on the farm, and the manner of managing the Bees. From the statement accompanying No. 35, (A. Gilmore, Wayne) we learn that the individual presenting it has invented a new arrangement for a Bee-house, by which he can combine several hives or swarms of Bees into one, and also regulate their work in different apartments, at his option. ‘I have,’ says he, ‘boxes attached, into which the Bees deposit honey, and which I remove at pleasure. Last spring I combined three swarms into one, and set them to work. I have paid strict attention to them, giving them food of such articles as they like, early in the spring, and occasionally during the season. I have taken from the boxes and tumblers three hundred and sixty pounds, and by a fair estimate, there are now two hundred pounds in the apartments. I could take away, without starving my Bees, six hundred and fifty pounds more, leaving behind three hundred and fifty pounds. Allowing one hundred and fifty pounds for the amount in the spring, when I put the Bees in, it leaves twelve hundred and ten pounds that they have manufactured during the season.’

The Committee think Mr. Gilmore is entitled to the Society's premium for the greatest quantity of honey produced on one farm.

Respectfully submitted,

B. F. ROBBINS, *Chairman.*”

The Editor of the *Maine Farmer* pronounces Mr. Gilmore's honey to be “pure and excellent.”

The food used by Mr. G. is cheap, and the profit of feeding in his method is represented to be very great,—besides securing, beyond the possibility of failure, an abundant supply for the bees, every year, whatever the season may be.

Mr. B.'s patent is for his arrangement of hives in connexion with each other, in an apiary, with an abundance of small boxes, (those he uses hold 5 lb. honey, each) set against and in connexion with each hive, in a rack, to be exchanged for empty ones as often as filled; and contrivances directing the whole force of the workers to any point he pleases, for removing old comb, for feeding, and for protection in winter. Further information may be obtained at this office.

Large vs. Small Cheeses.

The *Ashtabula Telegraph*, speaking of the great decline in the price of cheese in the northern part of Ohio, the last season, attributes it to the large size of the cheeses.

“It is stated by one of our most intelligent and cautious merchants, that his experience of New York prices of cheese, acquired during his fall visit to make purchases, settled in his mind, conclusively, the form and weight of cheese intended for export or for city

use. He found on inquiry at the highest source, that while five and a-half cents was the top price for our large sized cheese, the small ones, say from ten to twenty pounds, were quick of sale at nine and nine and a-half cents. This, he declared, was a fact worth knowing by a country merchant in the habit of buying cheese, and it is a fact worth knowing by those who make cheese. Large cheeses, however skillfully and carefully made and kept, are bad travellers. The principle of decomposition is inherent in every cheese, and nothing but dryness can arrest it; but in large dairies this degree of dryness is difficult of attainment,—is seldom attained. What is called *heaving* in cheese is simply fermentation, and this is the first step to decomposition, which is inevitable, after the *heaving* has once occurred. The great losses heretofore sustained by foreign merchants—purchasers of large cheese, have made them shy of the article, and their loss of character has led to their fall in value."

Dutch Poor Colonies.

The Dutch General Van den Bosch, while serving in the East, purchased an estate in the Island of Java, and there learned from a thriving mandarin, his neighbor, how to make the poorest soil richly productive by careful manuring, so that, on leaving the island, his estate sold for sixteen times its former cost.

Returning to his native country, his eye rested on some of the level wastes, covered with moss and sand, in some parts along the sea-shore, of Holland; and, with the heart of a patriot, upon these utterly barren spots he proposed to make the idle and degraded poor happy and thriving citizens. The weight of his character and his arguments prevailed. In the year 1818, a "Charitable Society," with twenty thousand subscribers, was formed to carry out his plans, of which members of the royal family became patrons.

A large tract of barren heath, in the Province of Drenthe, in North Holland, was purchased and divided into lots of three acres for each poor family.—Clothes and provisions, for a time, were furnished; snug dwellings erected; a cow and pig, and a plentiful supply of manure were advanced, on unlimited credit. In honor of one of its princely patrons, the settlement was named *Frederiksoord*. The society received paupers, at a certain low rate, from every town and parish, and installed them as tenants, with the privilege of easy purchase.

It may naturally be conceived that the early training of such a vagabond set, often the very sweepings of the streets of large cities, to be industrious farmers, was a difficult task. Many had never touched a spade before in their lives, and were about as ignorant of agriculture as the cow and pig that were given them. But the society persevered. The uninformed were instructed in their new pursuits; a system of manuring and rotation of crops was introduced; strict discipline was maintained; and, finally, rewards and medals for the well behaved were instituted, and the refractory were punished by being sent to earn their living by forced labor in the fields and workshops of the neighboring penal settlements of *Veenhuizen* and

Ommerichans. When there was no field labor, other occupations were furnished, so that all were fully employed; and at the end of the day, each colonist repaired to the public store, and received his wages, not in money, but such necessities as he required.—The enterprise being a charitable one, never yielded any pecuniary profit to the managers; but it succeeded beyond all expectation in completely regenerating many thousand poor. Their crops were luxuriant; they soon became happy and contented; and some rose to the possession of wealth. It was my privilege to be intimate with a young physician, who was the brother of one of the devoted clergymen sent to labor among these colonists, and I learned that they were well supplied with churches and schools. After 30 years' trial, the plan is in more vigorous operation than ever, and is now taken under the special protection of the government.

The knowledge gathered by a philanthropist on the sands of Java, has produced a harvest in his own country that will ever be a blessing. It has converted a dreary solitary waste to an immense garden, dotted over with cottages surrounded with fruit trees and flowers; multitudes who were once homeless beggars are now gathering in pleasant homes, and hopefully striving for a happier destiny.—*Dr. Corson's Lotterings in Europe.*

REMARKS.

This is instructive. In Holland, it was much to give, on credit, the capital to start with,—the cottage, the three acres, the cow, the pig, and the manure, and the little outfit of clothes and provisions.—This was necessary; for the occupants of the lands were absolute paupers. But of what avail would this have been, had the charity gone no further? It would all have come to nothing in quick time, but for the instruction, the advice, and the encouragement.

Now among us, there already exists the necessary capital. Thousands have the lands, the dwellings, the cow, the pig, the manure; and yet fail to flourish—yet hardly attain to comfort. What they need is, the knowledge, the stimulus, and the encouragement.

Is not this a proper sphere for the activity of our County Agricultural Societies? May not measures be taken that shall carry the influence of these societies home to the smaller landholders—the poorer farmers? Is it not possible to contrive some way here to reach many who will never otherwise get in the way to prosper, with some such instruction and some such impulse as the Dutch paupers received from their guardian Society? Clearly if it is possible, he that shall think out the ways and means will be a public benefactor.

DESTRUCTION OF RATS. Professional rat-catchers use substances to decoy the vermin into traps, or to places where they can be killed. The following is a composition used for this purpose:

Powdered asafoetida, $\frac{1}{2}$ grain.

Essential oil rhodium, 3 drachms.

" lavender, 1 scruple.

Oil of anniseed, 1 drachm.

Geometry applied to Farming.

It may appear, at first sight, as if the science of geometry could have but little to do with agriculture; and yet there are few of the ordinary occupations of life in which it is of such general utility. The farmer does not plant a row of corn, or construct a drain, or a road, or even plow his ground, without applying, whether he be conscious of it or not, important mathematical principles. He cannot build a fence, or plan a dwelling, or a barn, without describing mathematical figures; and in doing this he can, by the application of the few of the most obvious principles of geometry, be enabled to save as well time and labor as money. I propose, in this short article, to demonstrate the above fact in such a manner as shall render it plain to all. And first, let us take fencing.

The main object to be sought in building fences is, of course, to enclose the greatest possible quantity of ground in the least possible fence. It may seem a self-evident proposition, that a certain number of rods of fence will enclose a certain number of acres of ground, no matter in what particular form said enclosure may be made; but there cannot be a greater mistake, as I will presently show.

Most of the fields in this country are enclosed in the form of either squares or parallelograms. A parallelogram (I will explain, as every one may not understand the term) is a four-sided, right angled figure, having two long and two short sides; or, in other words, it is what is known in many parts of our country as an "oblong square." Now, suppose it be required to enclose a field with four hundred rods of fence, in what manner shall it be laid out so the said four hundred rods of fence shall enclose the most ground? If it be laid out in the form of an exact square, each side will be one hundred rods in length and the field will contain exactly ten thousand square perches, or sixty-two and a half acres. If it be laid out in the form of a parallelogram, having two long sides, each one hundred and fifty rods, and two short sides, each fifty rods, it will still require four hundred rods of fence; but it will contain only seven thousand five hundred perches of land, or about forty-six and three-quarter acres; showing the difference in favor of the square to be twenty-five per cent. A large majority of fields in this country are right-angled parallelograms, when squares would have been equally convenient, and a large portion of the labor and materials employed in constructing and keeping up the fences might have been saved. If fences were constructed without reference to other boundaries, as in enclosing a quantity of land on a prairie, the advantages of circles over every other form are still more obvious. For, suppose four hundred rods of fence be built in the form of a circle, it will enclose nearly twelve thousand seven hundred and fifty perches of ground, being two thousand seven hundred and fifty more than the square, and five thousand two hundred and fifty more than the parallelogram.

Hexagonal or six sided figures, approaching nearer to the form of circles than do squares, offer similar advantages. This is the form in which the bees build their cells, and science shows that in no other

form can an *assemblage* of enclosures be made with as little waste of material as in this, thus showing a beautiful coincidence between mathematical knowledge and animal instinct. On most farms circular or hexagonal fields would be impracticable, owing to the shape of the farm; but there are certain small enclosures where these forms are practicable. I have taken the above large enclosures as examples, because in them the advantage of one shape over another is more obvious. In small enclosures the proportion is equally great, though of course not equally glaring.

In enclosing gardens, barn-yards, sheep-folds, &c., the fences of which are usually built without reference to other boundaries, the circle offers advantages over all other forms. For if a certain piece of ground for a garden or barn-yard, be enclosed with two hundred and forty feet of fence, it will contain, if laid out in a parallelogram, eighty feet on each long side, and forty feet on each short side; three thousand two hundred square feet; if laid out in the form of a square, it will be sixty feet on each side, and will contain three thousand six hundred square feet; if it be laid out in a circle, it will contain four thousand five hundred and seventy-nine square feet. This shows the advantages of one form over another very plainly.

The same principle applies to the construction of out-buildings, such as corn-cribs, ice-houses, smoke-houses, or hog-pens, in all of which a large proportion of materials and labor can be saved by adopting their circular or hexagonal form.

Houses and barns have, from time immemorial, been right-angled buildings, and I suppose, according to the immutable laws of custom, must still be built so; but even here, a large amount of materials and money may be saved. I now speak of country houses, where the builder is not obliged to plan his house according to the shape of a contracted town lot. Nine tenths of all farm buildings are in the form of right-angled parallelograms; and in thus erecting them, space is sacrificed without any saving in labor or money. For, suppose a house or barn be built twenty feet front by forty in depth, which is a very common *proportion* for buildings; it will then require one hundred and twenty feet *length* of wall to enclose it, and its floor will contain eight hundred square feet. If it be built in the form of a square, thirty feet on each side, the length of wall required to enclose it will be the same; but its floor will contain nine hundred square feet, being the difference in favor of the square of one hundred feet, which, to the farmer, who likes a good roomy threshing-floor, or to the wife who rejoices in a roomy house, is an item of no small importance.

From the above premises, then, we may draw the following conclusions:—

1st: That all large enclosures should be, as nearly as possible, exact squares, not parallelograms or "oblong squares."

2d. That small enclosures, wherever practicable, should be circular, or some figure approaching the circle as nearly as possible.

3d. That small out-buildings should be circular, and large buildings, where plenty of room is desired, should be square.

4th. By adopting the above forms, a large proportion of time, labor, and materials, and therefore of money, may be saved without any sacrifice of space.

COLA.

NOTE. In endeavoring to make the above subject plain, I am aware that I have departed from the strictness of mathematical terms somewhat; but the conclusions deduced from the above, will, I think, be found mathematically correct.

C.

—*Philad. Dollar Newspaper.*

On Narrow Furrows.

MR. EDITOR: Your correspondent, D. E. Harriman, seems not aware of the fact that many English as well as Scotch plows are constructed expressly with the view of carrying a furrow nine inches only in width, and say from six to eight inches in depth, laying the furrow-slice at an angle of forty-five degrees; no one supposing that the convenience of the team is of the least importance, when compared with the business of careful and thorough culture. But these plows are built narrow at the breast and heel, with wings to the shares of not more than six or seven inches in width, and independent of the mould plate, with a very small and sharp point of steel 5 or 6 inches in length, by which a narrow and deep furrow is easily turned to that angle, which by them is considered the point of perfection. While turning their lands, the furrow-ox or horse goes with the near feet on the land, which in wet weather is considered injurious, in the way of hard-treading the soil, yet the necessity of narrow furrows has with them "no law," being the *sine qua non* on which every one insists. I find myself at issue with your correspondent on the subject of wide furrows at any time and in any place, nor do I admit that such can be thoroughly pulverized by any means of surface-culture he may adopt, and which will always be at an expenditure of after labor that no rational and economical practitioner would or ought to incur. What renders spade-labor preferable to any work that can be performed by the plow, even in the article of economy? because the whole of the business of turning over and breaking the soil is performed by one and the same operation, and also more perfectly done. I presume your correspondent has not been accustomed to turn small furrows, and I am willing to presume that this is the cause why he is opposed to the system, for all those that I have ever known, myself amongst the rest, have given it the preference after fair experiment; and to this cause I attribute his belief that no plow can be made to take a narrow and at the same time deep furrow. The Mid-Lothians in Scotland are considered as affording the best school for systematic plowing, which is the first letter in the cultivator's alphabet, and there no wider furrows than nine inches are permitted to be carried; and this is the most important rule proclaimed and observed at their plowing matches. The newly-invented additional coulter, which catches and splits the furrow at its rise, is spok-

en highly of, as regards its good effect in more thoroughly breaking and dividing the land, and I do not consider it sound policy to decry the use of an article until we have had an opportunity of witnessing its operations. That it might form a troublesome appendage in some soils and situations, does not militate against its value in the article of pulverizing more completely and thoroughly the soil. I presume that Jethro Tull was the first to introduce the plow with more than a single coulter. In the second edition of his invaluable work, now before me, is a cut of a wheel-plow, made after precisely the present Hampshire pattern (England), which has four coulters, showing most conclusively the high regard in which he held the system of thorough culture, by first and single operation. And it ought to be added that, besides this, he was an uncompromising advocate for small furrows in all cases.

In conclusion I would add, to the practice of turning wide furrows, with the presumption that the necessary pulverization can be given by any after-labor, I attribute the *unequal sample* which is so often observable in our grain when compared with that raised on the best cultivated lands of England, where, let it be remembered, the system of small furrowing is carried to the most scrupulous length. I consider the subject akin to that of deep and shallow culture, and of equal importance; and hope our friends will take it up and turn it over in the columns of the Cultivator.

R.

REMARKS. We would say, one of the very best cultivators in Pennsylvania (a Scotchman, and of the first standing in his profession as a nursery-man) applied to us not long since for a plow that would turn a deep and narrow furrow, in the preparation of a garden for fruit trees, reminding us that nine inches in width was as much as he would permit, and as little short of that depth as possible to obtain. We recommended to his notice the self-sharpening plows of Prouty & Mears, and at a subsequent meeting he expressed himself to this purpose: "In Prouty & Mears' No. 54 I found all that I required for all my purposes; no spade-labor could more perfectly pulverize the ground to the depth of about nine inches, with a furrow eleven inches wide."—*Bost. Cult.*

FEEDING QUALITIES OF PIGS. A correspondent informs us, he bought, in September, two Berkshire pigs, six weeks old. He kept them in a warm pen, and gave them the slops from a small family, intending them for breeding. On looking at them, the last of winter, he found them too fat for breeding, and accordingly slaughtered them, at eight months old, when one was found to weigh 240 lbs., and the other 278 lbs., dressed.

Another says, a sow, mostly Berkshire, was butchered on the 9th of January last, in Conn., at precisely a year old, and dressed 553 lbs. A neighbour has just slaughtered two swine, at about fourteen months old, both kept together and fattened in the same pen. One dressed 478 lbs.; the other 274 lbs. The lightest had eaten much more than the heaviest, and when

the last had filled himself from the trough, the other, though eating faster than his chum, was always on hand for the remaining food; a very coarse brute, too. So much for breed.—*American Agriculturist*.

Protecting Plants from Frost.

Connected with this subject, says the Albany Cultivator—I mean the guarding of plants in frosty nights—science was for a long time in the rear of practical knowledge. Within the present century, however, the radiation of heat has become better understood; and it is now known that every clod and stone and plant exchanges heat with every other thing that a direct ray can reach, until, if not interrupted, the temperature between them becomes equalized. A plant, however, radiating to the open sky from which there is scarcely any return, will cool off in half the time that another at the foot of a high wall, because the sky is shut out from the latter. Now, if over this plant a tile project horizontally from the wall, a still greater portion of the sky is excluded; and in frosty nights this shelter would often be sufficient to protect tender flowers; but it would be an improvement to have a shelf with hinges—dropping down to admit the sun and rain, or spreading out to preserve the radiated heat.

The value of such projections was known in the early part of the last century, perhaps earlier. Lawrence, in his volume on Gardening, printed more than one hundred and twenty years ago, said "they were found to answer to a wonder," and to secure the trained fruit wherever they were placed. In attempting to explain this result, however, he has given us a rare specimen of philosophy. He says:—

"Most of our frosts and blasts, both in spring and autumn, fall perpendicularly; and, therefore, the more anything lies open and exposed to perpendicular descent of vapors the more will it be the subject to be frozen and blasted. When a fruit tree has been trained against a slope wall (not upright) we always find that that is the first and most blasted. This, therefore, being the true state of the case, horizontal shelters are the best guard and defence against perpendicular blasts."—*Farmer and Mechanic*.

From the Horticulturist.

Preserving Fruits, Fresh for Winter Use.

[We commend the following to the memorandum books of those of our readers who aim at the choicest results of domestic economy and housekeeping. We have tasted peaches in mid winter, preserved at Baltimore, after this method, which, cut up and served with cream at the dessert, were almost undistinguishable in appearance and freshness of taste from August rarities fresh from the tree. We are assured the same results are obtained with strawberries, apricots, plums, &c., which are now extensively prepared in this way for market. As the process is a very simple one, we do not see why this mode of preserving the fruit, with its natural flavor, should not largely supersede the cloying preserves, made with sugar. Ed.]

DEAR SIR—In answer to your queries, regarding the mode of preserving fruits in this city, I send you the following, as that after which the specimens you tasted were prepared:

Send to your tinsmith and get a sufficient number of tin canisters, very carefully and tightly made. They should be of uniform size; and the shape preferred here is seven inches high by five inches in diameter—uniform cylinders.

Select the fairest fruit,—peaches, strawberries, or what you please. It should be just ripe, but not past the mature stage. Fill the canisters, place the tin lids on their tops, and solder them down very carefully. Only a small hole, of the size of a pin, should be left for the escape of air.

The next point is to drive the air out of the canister of fruit, to prevent its decay. In order to do this, take a broad boiler-pan, (with a flat bottom,) place the canisters in it, and fill it with boiling water within about three-fourths of an inch of the top of the canisters. The boiler being over a gentle fire, the water in it should be made to boil. This will drive the air in each canister through the small hole left in the top, as soon as the temperature approaches 200°; and in order to know precisely when it is all expelled, you must drop a few drops of water upon this hole. When the bubbles of air cease rising through these drops of water the air is all expelled, and then you may press a dry cloth over the hole and let a drop of solder fall upon it. This seals the canister up, hermetically, so that the fruit will remain unchanged for a couple of years, or longer. The immersion of the cans in the boiling water does not impart the slightest taste of their having been cooked to the fruit.

The canisters of fruit should be left in a cool place. When wanted for use, unsolder the tops with a hot iron and the fresh fruit is ready,—having been preserved without the aid of sugar or brandy.

Yours,

W.

The *Jonathan Apple*, for a specimen of which, (raised by Dr. Hatch of Burlington,) we are indebted to Mr. J. D. Hatch of this village, is very beautiful, an excellent keeper, and a pleasant apple, but not rich enough to rank first rate.

APPLES. The best quality of apples are selling at eight dollars a barrel, and inferior at \$3 50 to \$4.—This is almost equal to California. The fact is, that apples, and almost every other description of fruit, except peaches, were a failure last year, and high prices were the necessary result. Vergaloo pears sold last fall at \$21 a barrel. We never heard of such prices before, in this market.—*Jour. Com*

FRUITS AT PLATTSBURGH, N. Y. J. W. Bailey states that he has found the application of leached ashes a preventive for mildew in the *gooseberry*. The most profitable apples at that place are Early Harvest, Bough, Toole's Indian Rarities, Esopus Spitzenburgh, Rh'd Island Greening, Swaar, Roxbury Russet. Fameuse has proved very fine, till lately affected with bitter rot. Westfield Seeknought, of second quality, and moderately profitable. Pomme

Gris, "the richest of all winter apples," but too small for profit. St. Lawrence, profitable as a cooking apple. Rousseau, unprofitable; Bourassa, uncertain; Yellow Bellflower, promising well.—*Cultivator*.

Hovey's Greenhouses. The Messrs. Hovey, who have 36 acres devoted to horticulture in the vicinity of Boston, have also five large Greenhouses whose united length is near 1,000 feet. One of them contains about 2,000 Camellia Japonicas in full bloom!—according to a fragrant description in the *Boston Transcript*. A plant of the *Acacia pubescens*, standing 18 feet high, branching off into a head 8 or 10 feet through, and presenting a dense mass of blossoms, is also noticed, as the most graceful plant known. Like a willow in form, each branch was weighed down with its load of bright yellow racemes of flowers. Another object of special beauty was a lemon tree, over forty years old, having upon its strong branches upwards of 50 large lemons.

An adjoining Conservatory is made to accommodate 10,000 plants and trees. Everything rare and beautiful in the floral kingdom may be found in these inclosures.

Grafting Grape Vines. Mr. Curtis, member of Assembly from Onondaga county, stated at one of the agricultural meetings in Albany, that he had been very successful in grafting the Isabella on the common wild grape. He takes about fifteen to eighteen inches of the root of the wild vine, and inserts in it a scion of the kind he wishes to propagate. It is done in the ordinary mode of cleft or "split" grafting. The vine is planted so that the connexion of the stock and scion will be just below the surface of the ground. The operation is performed in the spring before the vines come into leaf. Mr. C. stated that he had vines so grafted, which bore considerably the first year, and sometimes they had made a growth of fourteen feet the first season.—*Cultivator*.

Sir Robert Peel has engaged a competent gentleman, at a yearly salary of £500, to give to his tenants information on agricultural subjects, and superintend improvements on the estate

GREAT DISCOVERY IN AGRICULTURE. Russell Comstock, whilom of this city, now of Duchess County, claims to have made a great discovery in agriculture, by which the growth of fruit trees and other cultivated crops of the farm or Southern plantation may be much accelerated, and their products increased as well as improved in quality. He proposes to reveal the secret to the public, if the Legislature will grant him a certain sum of money; and a bill has been reported for that purpose, with the very proper reservation that the money shall not be paid, unless a committee of scientific agriculturists, (provided for in the bill,) shall within three years report to the Legislature that in their opinion, "the claimed discovery or discoveries and improvements and knowledge, and rule and method of culture adopted thereby, by the said

Russell Comstock, shall be worth to be citizens of the State," and to posterity, the sum so appropriated. Several distinguished agriculturists to whom the secret has been made known in confidence, speak of it in high terms.—*J. of Com.*

The Markets.

CAMBRIDGE CATTLE MARKET, Feb. 27.

At market, 310 Cattle; about 210 Beeves, and 100 Stores, consisting of Working Oxen, Cows and Calves, Yearlings, Two Years Old, and Three Years Old.

PRICES. Market Beef—Extra, \$5 75 per cwt.; first quality, 5 25; second 4 75; third \$4; ordinary, \$3, a 3 50.

Stores—Working Oxen—\$60, 75, 90 a 108.—Cows and Calves—\$20, 28, 32 a 42. 7 veal calves sold at 4 at \$6 each. Yearlings, \$5, 7, a 12. Two Years Old, 10, 15, a \$20.—Three Years Old, 12, 16, a \$24.

Sheep and Lambs—1094 at market; Prices—Extra, 3, 5 a \$6. By lot—1 25, 1 75, a \$2.

Remarks—The market is hard; prices have declined but few sales have been effected.

52 cars came over the Fitchburg Railroad, and 12 over the Boston & Lowell Railroad, loaded with Cattle, Sheep, Horses and Poultry.

Number from each State:—Maine, 4 cattle; New Hampshire, 74 cattle, 162 sheep and lambs; Vermont, 205 cattle, 602 sheep and lambs, 12 horses; Massachusetts, 27 cattle, 330 sheep and lambs, 24 horses; Canada, 32 horses. Total, 310 cattle, 1094 sheep and lambs, 68 horses.—*Advertiser*.

WOOL—BOSTON, FEB. 28. The operations in fleece wool, during the past week, have been light. There is but little common or coarse wool in market, and the stock of fine is not nearly equal to the usual supply at this season of the year. Pulled wool is taken by manufacturers as wanted, at our quoted rates.

Prime Saxony Fleecings, washed, lb.	45	a	48
American full blood, "	40	a	42
do 3/4 "	37	a	39
do 1/2 "	35	a	36
do 1/4 and com. "	30	a	35
Smyrna, sheep, "	16	a	25
do do unwashed, "	8	a	14
Bengasi, do "	7	a	9
Buenos Ayres, "	8	a	20
Extra Northern pulled lamb, "	40	a	42
Super do. do. do.	38	a	38
No. 1 do. do. do.	33	a	35
2 do. do. do.	25	a	27
3 do. do. do.	15	a	16

—*Boston Courier*.

PANEUIL HALL MARKET—March 2.

WHOLESALE.					
Beef, fresh, lb.	7	a	12	Eggs, doz.	00 a 13
Mutton, 1st qual.	6	a	10	Apples, barrel,	3 50 a 4 00
2d "	4	a	8	Beans, bush,	1 50 a 1 75
Lamb, lb.	3	a	7	Pean, bush,	0 00 a 0 00
Veal, lb.	4	a	8	Potatoes, barrel,	2 00 a 2 50
Pigs, roasting, 100 a 1 22				Onions, bush,	75 a 0 00
Chickens, per lb.	10	a	14	Honey in comb,	10 a 20
Turkeys, per lb.	10	a	13	SEED—RETAIL.	
Geese, mongrel, 125 a 1 50				Clover, Northlb.	12 1/2 a 00
Pigeons, dozen, 1 00 a 1 25				Southern, "	8 a 9
Pork, per 100 lbs.	5 00 a 5 75			White Dutch, "	20 a 25
Lard, best, pr. bbl.	6 75 a 7 00			Lucerne, or French, "	33
Western, keg, 7 00 a 7 25				Herdgrass, bush,	3 50 a 0 00
Butter, lamp, lb.	20 a 25			Red Top, bush,	
do. firkin, 12 a 18				Northern, "	1 25 a 0 00
Cheese, new milk, 6 a 8				Southern, "	00 a 87 1/2
do. four meal, 5 a 6				Orchard Grass, "	a 2 00
				Fowl Meadow, "	2 50 a 0 00

The Way to get on in the World.

TO YOUNG MEN.

A WORKING MAN has lately published his own biography—one of the most interesting volumes that has appeared in the course of the present century. Would that it were in the hands of every one! It would do you more real good than three fourths of what is taught in Oxford in the course of seven years. The Working Man is one of the most able and eloquent writers of his time. What a lesson his life presents to young men! You may have his secret of success for a thing of naught. It follows:—

"It may to some appear like vanity in me to write what I now do, but I should not give my life truly if I omitted it. When filling a cart of manure at the farm dunghill, I never stopped work because my side of the cart might be heaped up before the other side, at which was another man; I pushed over what I had heaped up to help him, as doubtless he did to help me, when I was last and he was first. When I have filled my column of a newspaper, or sheet of a magazine, with the literature for which I was to be paid, I have never stopped if the subject required more elucidation, or the paper or magazine more matter, because there was no contract for more payment, or no likelihood of there being more. When I have lived in barrack-room, I have stopped my own work, and have taken a baby from a soldier's wife, when she had to work, and nursed it, or have gone for water for her, or have cleaned another man's accoutrements, though it was no part of my duty to do so. When I have been engaged in political literature, and travelling for a newspaper, I have not hesitated to travel many miles out of my road to ascertain a local fact, or to pursue a subject in its minutest particulars, if it appeared that the public were unacquainted with the facts of the subject; and this at times when I had work to do which was more pleasant and profitable. When I have needed employment, I have accepted it at what ever wages I could obtain—at plough, in farm-drain, in stone-quarry, at breaking stones for roads, at wood-cutting, in a saw-pit, as a civilian, or as a soldier. I have, in London, cleaned out a stable and groomed a cabman's horse for a sixpence, and been thankful to the cabman for the sixpence. I have subsequently tried literature, and have done as much writing for ten shillings as I have readily obtained—been sought after and offered—ten guineas for. But had I not been content to begin at the beginning, and accepted shillings, I would not have risen to guineas. I have lost nothing by working. Whether at laboring or literary work, with a spade or with a pen, I have been my own helper."

Domestic Economy.

WINTER SUCCOTASH. This is made of dried shelled beans, and hard corn. Take equal quantities of shelled beans and corn; put them over night into separate pans, and pour boiling water over them.—Let them soak till morning. Then pour off that water, and scald them again. First boil the beans by

themselves. When they are soft, add the corn, and let them boil together till the corn is quite soft, which will require at least an hour. Take them up, drain them in a sieve; then put them into a deep dish, and mix in them a large piece of fresh butter, and a little pepper and salt.

This is an excellent accompaniment to pickled pork, bacon, or corned beef. The meat must be boiled by itself in a separate pot.—*Miss Leslie.*

BOILING POTATOES. An Irish paper gives the following directions for cooking potatoes. Put them in a pot or kettle without a lid, with water just sufficient to cover them. After the water comes nearly to boiling, pour it off, and replace it with cold water, into which throw a good portion of salt. After they are boiled and the water poured off, let them stand on the fire ten or fifteen minutes to dry.

TO STOP MOUSE HOLES. Take a plug of common hard soap, stop the hole with it, and you may rest assured you will have no further trouble from that quarter. It is equally effectual as regards rats, cockroaches and ants.

WASHING MADE EASY. *Mr. Bateman.*—For the benefit of the sisterhood I wish to communicate the following recipe for a washing mixture which I have thoroughly tested, and find it will save fully one half of the labor of washing—to say nothing of the saving in other matters, such as "strained books," "cross words," "short dinners," &c., common to washing days.

Take 1 pint spts. of Turpentine, 1 pint of Alcohol, 2 ounces of Harshorn, 1 ounce of gum Camphor—shake well together; then to one quart of soft soap add three table spoonfuls of this mixture. Wet the cloths first, then soap them, (with the mixture,) lay them in a tub and pour warm water on them; let them remain half an hour or more, then squeeze them well out of that water—soap them again and put on to boil, then finish as usual by rinsing them, &c.

I say to all housewives try the above; and my word for it, you will soon consign the wash boards and patent washing machines to the flames. ANNA J. L.
—*Mass. Cataract.*

THE JOURNAL AND AGRICULTURIST

Is published Monthly, at Windsor, Vermont, by
BISHOP & TRACY,

and sent to subscribers on the following

TERMS:

For a single copy,	- - - - -	50 cents.
5 copies, sent to one address,	- - - - -	2 00
10 " " " " "	- - - - -	3 00
16 " " " " "	- - - - -	4 00

And any greater number at the rate last named, or 25 cents per copy.

IF Payment to be made always in advance, and the papers to be sent to one address, (the names of individual subscribers not written on their papers) and to be sent only so long as they shall have been paid for.

SCHOOL JOURNAL

AND VERMONT AGRICULTURIST.

Vol. III.

WINDSOR, VT., APRIL, 1850.

No. 12.

THE SCHOOL JOURNAL.

A Good Winter's Work.

The following article appeared in the Brattleboro papers. We understand that, as one happy result of these spirited proceedings, measures were taken at the annual Town meeting, for re-districting the town, with the view to enlarging some of the districts and providing good school houses for all.

HALIFAX TEACHERS' ASSOCIATION.

At the commencement of our winter's campaign, we (the teachers) were induced by the advice and approval of our Town Superintendent, to commence a series of meetings, under the name of "Halifax Teachers' Association." At each meeting some one of the Teachers were to write an essay, or a lecture, or provide a substitute; and after the lecture, questions pertaining to Common Schools were discussed, not only by the Teachers, but any one who was present. Any person might be considered a member of the Association by using his or her influence in its behalf, and these were to be known by their presence or writings.

We have numbered in all, thirteen Teachers—six males, and seven females. We had thought ourselves weak; but the thought that we had seven female assistants, nerved us to strong efforts; and much credit is due some of them for their liberal patronage, especially the Teacher in the North part of the town, Miss ———, who has not only attended most of the meetings, but has stimulated her scholars, so that they have, with her aid, prepared and presented a number of papers, entitled the "Scholars Offering," which is deserving of praise.

Meetings have been held every Wednesday evening, at some one of the School houses, and once we felt ourselves strong enough to hold two meetings the same evening, in different districts. The result was, that at each place was a large audience, and no time lost for the want of assistance. We hope each was productive of good. We have held in all, twelve, at which all the males, but one, and some of the females, have been much interested, and have taken an active part, using their influence and exertions, and have succeeded in awakening an interest among their patrons, and in general over the town, so that they have invariably given us a good and attentive hearing;

and in most cases some of them took part in the discussion.

The following with other kindred subjects were discussed:

The good that has emanated from the present School Law—the examination of Teachers.

The proper method of governing schools—whether Corporal Punishment should be enacted or not.

Whether teachers or parents are responsible for the failures of Schools.

Ought any other studies, save the common English branches—allowed by the Statute of the State—be brought into the Common District Schools? &c.

The old School Houses were examined, inside and outside. No nook was left unsearched. Propositions were made to pull down and build new, and to that end, united small districts, which would, in some instances, be advisable.

I see no reason why Halifax may not be ranked with other towns, which are now unfurling to the breeze their high raised banners, blazoning forth the inscription, "EXCELSIOR."

It is the first business to prepare a suitable cage to put the bird in, before you catch it, and it should be the first business to prepare School houses for teaching, before you send pupils to them; but for the people to say that the school houses in this town are suitable to educate children in, is absurd. For, not only do December's cold and chilling blasts, penetrate their rickety frames, making it necessary to raise a heat within, that will roast one side while the other is chilled and shaking by the strokes of the merciless visitor who is very constant and perpetual on these hills of ours, but misery or a complete uproar reigns. A School Room must be quiet in order to learn; but how can they remain silent, while they are hung up, their feet not touching the floor, and the body inclining—as it must be—forward. Thus they are in perfect misery, if they long retain the one position. Then shift they must, from side to side, but find no rest—the body becomes wearied, and the mind of course, inattentive and sluggish, making little progress, or little compared with what they might have done, if they had had proper accommodations. Then because the pupils have not made greater progress, the fault is charged upon the teacher, which is unjust and cruel. A teacher may be ever on apt, and possess the wisdom of Solomon, but under these circum-

stances, his scholars will make little proficiency, and it cannot be expected that they will progress until these shaking and shivering machines are converted into comfortable and commodious houses; nor can we expect our schools to rank with those of our sister towns and States.

THE SCHOOL JOURNAL AND VERMONT AGRICULTURIST. The reader has now before him the last number of the third volume of the "School Journal and Vermont Agriculturist;" with it we suspend the publication for the present. We have received from different parts of the State strong expressions of regret, good wishes, and some determination for future efforts; but regrets, good wishes, and even determination for future effort do not answer our purpose. We want guaranteed to us in the several counties in the State, at least 3000 subscribers; and until we have this, we must suspend the publication of the paper—remarking that we shall be ready to resume it when the friends of the enterprise in the State shall signify, in the way above proposed, their wish to have us do so; but at the price at which the paper has been put, we cannot offer to agents a commission sufficient to induce men to engage in the business of obtaining subscribers. If the paper is therefore published at the price it has been, the work of securing subscribers must be done, to the extent above specified, by its friends in the several counties.

In some parts of the State the paper has been delayed, and sometimes lost, by the irresponsible and irregular transportation by Stage; but with the two efficient lines of Express, running through the State, that difficulty would be obviated, so that in future the paper would be received without failure, and in due season. We must here wait the action of its friends.

From the Report of Rev. James Tufts, Superintendent of Windham County.

Examination of Teachers.

I have examined, and assisted in the examination, of about 200 teachers during the year. Eight candidates have been refused certificates, and twelve have received certificates marked deficient in one or more branches. Of the teachers examined, one-third answered the questions promptly and accurately, showing a good degree of general intelligence and cultivation of mind, ability to explain and illustrate rules, as well as that promptness and tact, so necessary to a successful teacher. The next third, or second class, bore a favorable examination, appearing well in some branches, hesitating in others, exhibiting less promptness, cultivation of mind, and general intelligence, than those of the first class, though not very deficient in any of the common branches. In the next, a third class, who stood lowest in the examination, and yet obtained certificates, would be included those who were quite deficient in one or more branches; (their certificates being marked accordingly;) old teachers imperfectly qualified; young teachers, naturally bright, active and promising, their answers not being ready, precise, and full, but vague, hesitating and imperfect, while many plain questions they could not answer at all. Making due allowance for bashful-

ness and timidity, many do not evidently know enough to teach, and should themselves attend rather than teach school.

The teachers appeared best in Arithmetic of any branch, and I have observed that this branch is, too, the most thoroughly taught, both in our Common Schools and Academies.

Those I have examined have appeared, generally, more deficient in Geography than in any one branch; deficient not only in answering particular questions, but in that general knowledge and interest in the subject which are essential to the successful teacher; showing evidently that Geography has been poorly taught in our schools. One teacher, who had taught several schools, said the Andes Mountains were in Asia; another could not tell where Rome was, or mention a single river in Europe. Several could not name a river or mountain in Asia. One old teacher placed Cincinnati on Lake Erie; another bounded Ohio on the north by Lake Ontario, east by New York, and south by Kentucky; and he could not tell how it was bounded on the west. Not one-third of the teachers could tell any thing about our latitude, whether ten or fifty degrees north.

I have observed, too, that Geography is very poorly taught in the schools I have visited. The teachers do not get up any interest in the study, asking only book questions; and with good reason, for they do not know enough to ask any other. I ought to except from these remarks many schools where there are Mitchell's Outline Maps, and where teachers have pupils draw maps on the black-board, and try to teach as they should.

Owing to the efforts of our former County Superintendent, and of the teachers in our Academies, there has been a very great improvement in the appearance of the teachers in orthography. Of the list of twenty words, one-fourth did not misspell over one or two—many none at all; one-fourth missed perhaps two or three; a third fourth, four or five, and the last fourth from five to eight. Spelling, too, is more thoroughly taught than it has been in district schools, and we may soon hope that our youth will learn to spell before they leave the district school.

Great improvement has been manifest in the reading of those examined, as the Academies have given special attention to this branch. Still, there is too much of the monotonous, parrot-like reading in our schools. Teachers allow their pupils to read *through the book*, and do not drill them in emphasis, inflection and tone, making them read the same sentence over and over, till it can be read properly.

Most of the teachers have some slight acquaintance with history, and it is to be regretted that this useful branch of study is so little attended to in our district schools. In some towns not a single scholar studies history.

NORMAL SCHOOL IN MICHIGAN. The State of Michigan has appropriated 25 sections of salt lands for the establishment and endowment of a Normal school, to be located at Ypsilanti. These lands, the Detroit Tribune says, are very valuable and will readily command a market. The school is to commence

about the first of November next. Each county will be permitted to send every year three times as many students as they have representatives in the Legislature.

How to Train the Conceptive Faculty.

Isaac Taylor, one of the most remarkable thinkers of this age, has indicated the best method of training the "conceptive faculty." The following extract from his work on Home Education will be read with interest and profit by teachers and others:—

A description of the earth, combining many topics, separately treated of in five or six sciences—that is to say, astronomy, geology, hydrography, mineralogy, meteorology, and to some extent, natural history, affords as good an opportunity as we can anywhere find for calling the "conceptive faculty" into play, and for enriching it with splendid ideas. What we want, in the training of this faculty, is, to accustom the mind to stretch out from the boundary of things actually seen, and to give it a sort of intellectual ubiquity, by the vigorous effort which realizes remote scenes as analogous to surrounding objects, and yet as unlike them. A child is to be tempted on, until he breaks over his horizon; he is to be exercised and informed until he can wing his way, north or south, east or west, and show his teacher, in apt and vivid language, that his imagination has actually taken the leap, and has returned—from the tempest-rocked Hebrides, or the ice-bound Northern Ocean; from the red man's wilderness of the West; from the steppes of Central Asia; from the teeming swamps of the Amazon; from the sirocco deserts of Africa; from the tufted islets of the Pacific; from the heaving flanks of *Ætna*; from the marbled shores of Greece.

By taking up the elements of natural scenery, as found in our own landscapes and climate, by the copious use of pictorial illustrations, by well-selected passages from the most lively of our modern travelers, and, as the master method, by combining the whole in a vivid, condensed, and even florid colloquial style—the *rice voce* painting that embodies the entire wealth of the language, as to its epithets; by these means all the rich scenes of our planet may be lodged in the minds of children, and so may become treasures of thought, imparting hereafter, even when least apparent, a copiousness, and a breadth and variety to the style of speaking and of writing on whatever subject. Need we compare this kind of enrichment of the conceptive faculty with the hard-acquired ability to tell you, in a moment, the latitude and longitude of fifty towns, or the population—"according to the last returns and the best authorities," of the capitals of Europe?

NEW INCENTIVE TO STUDY. We are pleased to learn (says the *N. Y. Express*) that the plan first suggested by Mr. H. L. Stuart, of selecting from among the most studious scholars in every Ward and Public School one or more of them for a *daguerreotype*, to be ultimately engraved, meets with very general approbation. We like the notion very much, as

it will prove the highest possible incentive to excellence. A prominent artist has arranged to take the groups and furnish each school with a copy free of cost; thus we may expect immediate action in the premises.

The Teacher.

The teacher should be the *text book* of the entire school. If dependent upon books to furnish information to his pupils, there will be but little advancement made. Knowledge should drop from his lips "like the gentle rain from heaven." Impressed upon the susceptible and expanding mind by the living voice, the facts and principles of science leave their indelible traces there, and new ideas and new thoughts are generated, which wake up others, conducting, thereby, the inquiring pupil rapidly onward in his important pursuit.

To this end, mind must be thoroughly disciplined and thoroughly trained. The Teacher must accustom himself to *think* deeply and variously, to *read* judiciously and analytically, and to *observe* closely and patiently. No hour should go by without its appropriate contribution to the stock of mental acquisitions; and all his knowledge should bend to the accomplishment of his important and honorable work. Feeble mental capacity will make every motion weak. The want of mental discipline will keep his mind in perpetual confusion. *Darkness is the child of Chaos*—no light dawns upon the mental vision of the pupils of such a Teacher.—*Massachusetts Teacher.*

"The German and French have a beautiful phrase, which would enrich any language that should adopt it. They say, 'To orient;' or, 'to orient one's self.'"

"When a traveler arrives at a strange city, or is overtaken by night, or by a storm, he takes out his compass and learns which way is the East, or Orient. Forthwith all the cardinal points,—east, west, north, south,—take their true places in his mind, and he is in no danger of seeking for the sunset or the pole-star in the wrong quarter of the heavens. *He orients himself.*"

"Young man! open your heart before me for one moment, and let me write upon it these parting words. The gracious God has just called you into being; and, during the few days you have lived, the greatest lesson you have learned is, that you shall never die. All around your body the earth lies open and free, and you can go where you will. All around your spirit, the universe lies open and free, and you can go where you will. *Orient yourself! ORIENT YOURSELF!*"—*Hon. H. Mann.*

COMPOUND INTEREST. The following simple rule will show the number of years in which a single sum will become double in amount, by the accumulation of compound interest, for all rates of interest not exceeding 10 per cent. Divide 70 by the rate of interest per cent., and the quotient is the number of years required. Thus 70, divided by 10, will give 7 years; by 5, 14 years; by 4, nearly 18 years; by 3, nearly 24 years; by 2, 35 years.

Jacotot's Maxims for Pupils.

1. *Resolve to learn something without assistance.*
2. You may begin with what you please, and with any part of the subject which you prefer. Nothing is easy, nothing is difficult. All is difficult to the will—all is easy to the intelligence.
3. *Believe that you can learn* what you resolve to learn. The first artists and learned men had no teachers; and many since have attained the highest eminence without aid. What man has done, man may do. All that is necessary is attention and resolution.
4. To emancipate yourself, *the thing learned* is not important. The *manner of learning* is essential.
5. Rivet your attention upon what you are to learn.
6. Learn it thoroughly, so that every part of it may be present to the mind; so that you may recall it without hesitation; that you may refer to it with absolute certainty.
7. REFER ALL THAT YOU LEARN TO THIS. COMPARE ALL WITH THIS.
8. Be not discouraged if you do not understand at first. Review and repeat again and again what you learn, and you will gradually understand more and more.
9. Do not despise this as mechanical knowledge. The greatest philosopher first learns a subject or an object mechanically, examines all its parts, and then attempts to reason about it. To reason earlier, is to reason prematurely, and to this are due many of the received errors. The subject is decided upon before it is thoroughly learned. Sir Isaac Newton said he made his great discoveries merely by thinking about them.
10. To learn by heart is nothing. It is mere knowledge—mere mental perception. We cannot *help* perceiving, unless we shut our eyes. To use this knowledge is *intelligence*.
11. Commence with the whole, and not with the parts.
12. Examine it on all sides and in all relations.—When you have thoroughly learned the whole, examine the parts. Analyze forms, and sounds, and ideas—everything which belongs to it, and classify them.
13. In music and oral language, employ your master as you do your musical instrument—as the machine—the book from which you are to learn what cannot be written. Imitate him precisely. Observe and compare his notes with yours, correct where you find them vary. Repeat the same tones day after day, until you can perceive no error.
14. In design or description, observe the same object. Describe or draw it. Review what you have done. Observe the defects. Correct, observe, and describe, or draw again till you can satisfy yourself.
15. In learning a language, observe in the same way the words and expressions used by the best writers in that language. When you have the same ideas to express, employ the same words in the same form and in the same order, and you cannot but write correctly. There is no other rule for correctness in language but those derived from its writers and speakers, and if you read good writers, you will imitate and practice on these rules.

16. Compare the writer with himself. Observe how he employs new words, or how he varies the form and order of words, according to the sense.—Draw out from them a scheme of forms, or a set of rules. If you prefer it, begin with the grammar; but make yourself master of the principles, and especially verify them all by comparing them with an author.

17. In studying any author, learn first what he says on the subject perfectly. Reflect on it. Compare one part with another. Examine for yourself. Write his views and your own reflections. Verify them by comparing and re-examining. Thus you will become acquainted with the subject, and with the art of writing and reasoning.

Jacotot's Maxims for Teachers.

1. Your first and great duty is, to keep your pupil constantly employed about some useful subject. Never suffer him to waste or slumber away his time. Admonish—stimulate him to do something.
2. Present objects, and sentiments, and facts, for his consideration, now in one position, now in another. Oblige him to observe them on all sides. Ask him if he has seen all, and leave him to discover.
3. Oblige him to reflect on every thing that he sees, by requiring him to write or express his thoughts upon it.
4. Call upon him to verify his opinions and expressions, to justify all that he does, by referring to reason or authority.
5. Never expect that he will *perceive* or *say* every thing relating to a subject. *You cannot.* Do not anticipate that he will *understand every thing.* *No man does.* Be satisfied if he is sensible of his ignorance, if he is learning something. Rome was not built in a day.
6. Do not therefore attempt to force matters by your own explanations. He does not need them. They will debase him by making him think himself dependent for his ideas on the intellect of others. They will make him a sluggard. Leave him to learn alone, and he will find them himself in due season.
7. Do not correct his mistakes. Oblige him to search for them. Give him time and he will correct himself. Do not make him a machine, to be moved by your impulse.
8. Encourage him to effort, by approbation of his success. Stimulate him, by showing him that he is yet imperfect. Subdue his vanity, by convincing him that every one can do the same with proper effort.
9. In short, act upon the principle that *human intelligence* is a unit—that the difference of men consists in the power of attention and will, and in the degree of knowledge—and you will find reason to believe it true. Teach your pupils to believe that they are able, and you will find them able. Cultivate the spirit of resolution—the force of will—and you will do more to make them scholars, than by volumes of explanation.
10. When you have succeeded in inducing them to exert their powers, and to be conscious of their inde-

pendence of others for knowledge; they are emancipated. Then you may aid them occasionally by your experience and knowledge with safety and usefulness.

The Choice of Books.

In selecting books we may be aided much by those who have studied more than ourselves. But after all, it is best to be determined in this particular a good deal by our own tastes. The best books for men are not always those which the wise recommend, but oftener those which meet the peculiar wants, the natural thirst of the mind, and therefore awaken an interest and rivet thought. And here it may be well to observe, not only in regard to books, but in other respects, that self culture must vary with the individual. All means do not equally suit us all. A man must unfold himself freely, and should respect the peculiar gifts or biases by which nature has distinguished him from others. Self-culture does not demand the sacrifice of individuality. It does not regularly apply an established machinery for the sake of torturing every man into one rigid shape, called perfection.

As the human countenance, with the same features in us all, is diversified without end in the race, and is never the same in any two individuals, so the human soul, with the same grand powers and laws, expands into an infinite variety of forms, and would be wofully stunted by modes of culture requiring all men to learn the same lesson, or to bend to the same rules. I know how hard it is to some men, especially to those who spend much time in manual labor, to fix attention on books. Let them strive to overcome the difficulty, by choosing subjects of deep interest, or by reading in company with those whom they love.—Nothing can supply the place of books. They are cheering or soothing companions in solitude, illness, or affliction. The wealth of both continents would not compensate for the good they impart. Let every man, if possible, gather some good books under his roof and obtain access for himself and family to some social library. Almost any luxury should be sacrificed for this.

RESPECT FOR PARENTS. If children could realize but a small portion of the anxiety their parents feel on their account, they would pay far greater respect to the paternal wishes. A good child, and one in whom confidence can be placed, is the one who does not allow himself to disobey his parents, nor do anything when his parents are absent, that he has reason to believe they would disapprove, were they present. The good advice of parents is often so engraven on the heart of the child, that after-years of toil and care do not efface it; and in the hour of temptation the thought of a parent has been the salvation of the child, though the parent may be sleeping in the grave, and the ocean may roll between that sacred spot and the tempted child. A small token of paternal affection, borne about the person, especially a parent's likeness, would frequently prove a talisman for good. A Polish prince was accustomed to carry the picture of his father always in his bosom; and on

any particular occasion he would look upon it and say, "Let me do nothing unbecoming so excellent a father." Such respect for a father or mother, is one of the best traits in the character of a son or a daughter. "Honor thy father and thy mother, that it may be well with thee, is the first commandment with promise," says the sacred Book, and happy is the child who acts accordingly.

ON RECREATIONS. Never let your amusements interfere with your duties. Lose not the early part of the day in recreation: "Pastime," says an old writer, "is poison in the morning."

Large assemblies, where all sorts of persons congregate for amusement, are to be avoided. It is difficult to come out pure from the midst of contagion, and no one can participate in improper and vulgar amusements without suffering from the evils they spread around them.

Any amusement which tends to stimulate the passions, to excite impure emotions, or to corrupt the heart, may without hesitation be deemed sinful. Theatrical entertainments, though frequently defended as of a harmless and even moral nature, certainly come under this denomination. They personate the worst characters in vivid colors, give utterance to profane and immoral sentiments, and are resorted to by the most vicious characters,—thus they offer the contamination of corrupt associations, and are prolonged to late hours, which are additional sources of danger. Public revels, balls, horse-races, cock-fighting, prize-fighting, betting, and gambling, are so generally accounted immoral that they need only to be mentioned to be condemned.

Avoid, in short, every diversion attended with cruelty, immorality, and impiety, which gives pain to any fellow-creature, which pollutes the mind, or renders it indisposed to devotion.

A passion for amusement wastes time, enfeebls the body, dissipates the mind, destroys usefulness, and leads to great expense. "He that loveth pleasure," says Solomon, "shall be a poor man."

Exercise, books, the beauties of nature, intercourse with children, and conversation with suitable companions, furnish agreeable and sufficient relaxation for properly regulated minds.

LEISURE HOURS. It was a beautiful observation of the late William Hazlitt, that "there is room enough in human life to crowd almost every art and science in it. If we pass 'no day without a line'—visit no place without the company of a book—we may with ease fill libraries or empty them of their contents.—The more we do, the more we can do; the more busy we are, the more leisure we have."

AMOUNT OF CONVERSATION CALCULATED. The Rev. Mr. Gaugett of Boston, reckons that every individual averages three hours' conversation daily, at the rate of a hundred words a minute, or twenty pages of an octavo volume in an hour. At this rate we talk a volume of four hundred octavo pages in a week, and fifty-two volumes in a year.

Curiosities of Stutgard.

The following interesting account of some of the curiosities to be found in Stutgard, is given by a German paper of Pittsburgh :—

"The royal palace of Stutgard abounds in curiosities and magnificent works of art of the most eccentric kind. In one of the sleeping apartments is a *necessaire*, or toilet box, worth at least 5000 guilders, or 12,500 francs, and a bed which was made for Napoleon Buonaparte, which cost 40,000 francs. When you cross the threshold of one of the saloons, a white spaniel springs barking to the door, being moved by clock-work and a spring. Another clock represents a female figure, made of porcelain, the full size of life, and in national color. The mouth of the figure is open, displaying 12 front teeth, all numbered from 1 to 12. In the morning, at 6 o'clock, these teeth have disappeared, and the mouth is toothless. At 7 o'clock, the lady takes a tooth from the box on her right, and places it in her mouth; at 8 she adds another, and so on till 6 in the evening, when all 12 are in. At 7 o'clock she takes away one, and thus on until 6 o'clock in the morning, when the jaws are once more toothless.

The clock is wound up once in six days. A barometer is so arranged that when it portends rain, a little man runs out of the house with an open umbrella in his hand, and when it is about to snow, he comes out with a cloak on, and an approaching thunder-storm the little man announces by coming forth with a prayer-book in his hand. These indications take place twelve hours in advance of the impending change. There is also a clock in one of the rooms, representing a little man taking a pinch of snuff every hour, and sneezes a number of times corresponding with the hour. In the library there is a copy of Buffon's Natural History, in 24 volumes folio, which is printed on pure white satin, while the illustrations are embroidered on it in floss silk. There is a saloon in the place, 50 feet long, and 25 feet broad, the floor of which is covered with one mirror, so thick and solid that one can dance on it. This mirror was a present from the Emperor Alexander to his sister, the late queen, and cost two millions of silver roubles."

EDUCATION OF THE HAND. In type-founding, when the melted metal has been poured into the moulds, the workman by a peculiar turn of his hand or rather jerk, causes the metal to be shaken into all the minute interstices of the mould.

The heads of certain kinds of pins are formed by a coil or two of fine wire placed at one end. This is cut off from a long coil fixed in a lathe; the workman cuts off one or two turns of the coil, guided entirely by his eye, and such is the manual dexterity displayed in the operation, that a workman will cut off 20,000 or 30,000 heads without making a single mistake as to the number of turns in each. An expert workman can fasten on from 10,000 to 15,000 of these heads in a day.

The reader will frequently have seen the papers in which pins are stuck for the convenience of sale;

children can paper from 30 to 40,000 in a day, although each pin involves a separate and distinct operation.

In stamping the grooves in the heads of needles, the operative can finish 8000 needles in an hour, although he has to adjust each separate wire at every blow. In punching the eye-holes of needles by hand, children, who are the operators, acquire such dexterity, as to be able to punch one human hair and thread in with another, for the amusement of visitors!

In finally "papering" needles for sale, the females employed can count and paper 3,000 in an hour.

"Until children have completed their fifth year, no painful task should be imposed and no violent exertions required from the mind or body, lest health might be injured and growth obstructed. All that utility demands is to keep the faculties awake, and to prevent them from contracting habits of sloth; which will be best effected by such plays and sports as are neither illiberal, nor fatiguing, nor sedentary. Before the eighth year the school for children ought to be the father's house; but during this period they must be strictly guarded against the infectious communication of servants, no illiberal gesture is to be presented to their sight, no illiberal image is to be suggested to their fancy. Low and indecency of language ought to be reprobated in every well regulated city; without shame, there is an easy transition to the practising of filthy actions without disgust."—*Aristotle's Politics, Book 5.*

The man who lies under no external obligation, (none that is apparent and palpable,) to occupy himself in one way or another, will become a prey to many demands for small services, attentions, and civilities, such as will neither exercise his faculties, add to his knowledge, nor leave him to his thoughts. The prosecution of a contemplative life is not an answer to any of these demands, for though the man who is in the pursuit of an active calling, is not expected to give up his guineas for the sake of affording some trifling gratification to some friend, or acquaintance, or stranger, yet the man who has renounced the active calling and the guineas, in order that he may possess his soul in peace, is constantly expected to give up his meditations, and no one counts it for a sacrifice. Meditation, it is thought, can always be done some other day. A man without something indispensable to do, will find his life to be involved in some of the difficulties by which a woman's life is often beset, one of which difficulties is the want of a claim paramount upon her time. And these difficulties will not be the less, if the poet have, as he ought to have, something of the woman in his nature—as he ought to have, I aver, because the poet should be *hic et hæc homo*—the representative of human nature at large, and not of one sex only. With the difficulties of a woman's life, the poet will not find that any of its corresponding facilities accrue; he will find claims to be made upon him as upon a man, and no indemnities granted to him as a poet. Thus it is that in the bustling crowds of this present world, a meditative man

finds himself, however passively disposed, in a position of oppugnancy to those around him, and must struggle in order to stand still.—*Henry Taylor's Notes from Life.*

What Constitutes a Man?

What constitutes a man?
 Not impious titles due to God alone;
 Not Fame extended wide
 Beyond Life's puny span;
 Not the vain things
 Of stern imperious power,
 The baubles of an hour,
 The gew-gaw trappings of vain Folly's throne,
 To puff a worm with pride,
 Amid the ermined dignity,
 And marshall'd pageantry,
 And pale, cold-hearted pomp of tyrant Kings;
 Not bloody trophies of the battle-field,
 Waving o'er knightly stall;
 Or blazoned charger of the antique shield,
 Hung in ancestral hall;
 Not wealth, nor high estate,
 Nor yet possessions great;
 Not stern Philosophy.
 By crucibles of dark and wizard mystery,
 Rousing the mind
 To strike it blind;
 Nor the profoundest knowledge
 Of cloister, school, and college,
 Burning with light beyond the ken of time
 In majesty sublime;
 These do not make the *Man*.
 No! Man is made from mind, as well as earth,
 By unassuming worth;
 Not *puffed up* by the ideal,
 But *built up* by the real;
 The noble architecture of Humanity,
 Whose dome does reach the sky
 In its diviner masonry;
 Where sound and ripe whole-heartedness,
 And clear and bold straightforwardness,
 Have their high birth.
 Squared, plumbed and measured by old *Honesty*,
Integrity his base;
 His strong foundation *Faith* and *Truth* and *Love*.
 The Temple of Man's Majesty,
 O'ershadowed by the porcelletal dove,
 Becomes at last the shrine of the Most High,
 Who talketh with his spirit face to face,
 In words that shall not die;
 And breathing in his nostrils breath of life,
 He then becomes a living soul,
 With *Virtue* ripe,
Philanthropy and boundless *Charity*.
 He lives heroic in his active deeds,
 Works the achievements of true heraldry;
 From the sad eye that weeps, and the torn heart that bleeds,
 A vital centre to a wondrous whole;
 A life-pulse beating in deep sympathy
 With the Eternal place,

And the lost human race.
 This constitutes a *Man*!
 And such a man was He.

EMPLOY YOUR PEN. This council, though less frequently given than others, is nevertheless far from being superfluous. There is a marvellous power in writing down what we know. It fixes the thoughts; reveals our ignorance; methodizes our knowledge; aids our memory; and issues command of language. "*Men acquire more knowledge*," says Bishop Jewell, "*by a frequent exercising of their pens, than by the reading of many books.*"

LITERARY FUND IN NEW YORK. The Regents of the University of New York have just distributed among about twenty academies in that State, the sum of 2,385 dollars, from the revenue of the Literary Fund, for the purchase of books and apparatus—an equal amount having been raised by the academies themselves, from sources independent of their corporate funds, for the same purpose. The Regents have also distributed the sum of 40,000 dollars among about 200 academies, being their several portions of the income of their Literary Fund for the year past.

GOLD. A correspondent of the London Times says, "It will hardly be believed that the whole quantity of gold currency in the world, taking it at its usual estimate of £150,000,000 sterling, would only weigh 1150 tons, and that in bulk, a room 20 feet long, 12 feet wide, and 10 feet high, would hold it all."

VALUE THE SMALLEST FRAGMENTS OF KNOWLEDGE. In manufactories of gold, I have observed that they save the very sweepings of the floors, and put network at the windows; the little morsels and fine dust of the precious metals, thus saved in this city, amount to hundreds of dollars in a year.

A man should never be ashamed to own that he has been in the wrong: which is but saying, in other words, that he is wiser to-day than he was yesterday:—*Pope*.

A wag has truthfully said, that if some men could come out of their graves and read the inscription on their tomb-stones, they would think that they had got into the *wrong grave*.

A fly may sting a noble horse, and make it wince, but is but an insect, and the other is a horse still.

A bill has been presented in the Mississippi Legislature, requiring physicians to write their prescriptions in English instead of Latin.

It is calculated that the heat produced by respiration in 19 hours, in the lungs of a healthy person, is such as would melt about 100 pounds of ice.

In Belgium, every acre of ground supports three persons. At this rate the population of the United States would be no less than 7,500,000,000 souls.

Never take a paper more than ten years without paying the printer, or at least sending him a lock of your hair to let him know that you are about.

Monotony—An Exercise.

Monotony is a choke damp to anything that can be called good reading. It would be something like a faint illustration of its baneful influence, were some stupid bungler to take a one stringed fiddle, and without varying the tone in the least, keep up a continuous scrape—at the same time calling out the words of "Sweet Home," or "When I am Gone," or "Hail Columbia," or any other piece of delicate and various sentiment. Every man perceives how utterly incongruous and absurd it would be, for some zealous finger of nasal strength, with a voice as sharp as that of a cracked flute, and uniform as the ocean's level, to assist in singing "Old Hundred," or "Hamburg," or "A Life on the Ocean's Wave"; and yet how many thousand of performances as incongruous and ridiculous, are taking place at this moment, among the readers in the schools of our land. Amid the thousand and one emotions and feelings of hate, surprise, joy, sorrow, terror, love, reverence, pride, scorn, despair, agony, remorse, etc., which spring native from the soul, there is not a single one which does not find a peculiar and intended channel of expression in the human voice. To express these properly, the voice is susceptible of a thousand variations, and to acquire the power of making these variations at will, ought to be one object in teaching to read. We have always had pupils who seemed unable, at pleasure, to make the most elementary changes in inflection. We have partially succeeded in remedying this defect by assigning to the class columns of words in the speller; and, in succession, requiring one pupil to pronounce a word with the intense rising slide, and the next with the intense falling slide. The exercise may be varied by giving to the different syllables of long words the two slides in alternation. It has been found a valuable preliminary exercise to reading, to require the pupils to alternate the two slides, in pronouncing the successive words of the lesson to be read—*School Friend*.

ADVERTISEMENT. "Wanted immediately, a man to take care of a pair of horses of temperate and industrious habits."

CAPTION TO A POEM. "The following lines were written by one, who, for more than ten years was confined in the Penitentiary for his own diversion."

REPORT OF A SCHOOL COMMITTEE. "The committee would further suggest some change in the internal arrangement of the building, as a large number of seats have long been occupied by the scholars that have no backs."

The faster you read the following the more amusement you will have:—

"I saw five brave maids, sitting on five broad beds, braiding broad braids. I said to those five brave maids, sitting on five broad beds, braiding broad braids—Braid broad braids brave maids."

The value of diamonds is measured by the carat of four grains, the single carat being worth \$40, two carats \$80, three \$120, and so on. A diamond of one hundred carats is worth \$400,000.

For the School Journal.

The Algebraic Paradox.

Messrs. Editors:—While examining the "Algebraic Paradox" in No. 11, it occurred to me that by a process analogous to the one employed in that, the equation $1=3$ might be deduced; and consequently, that a rule might be given for deducing equations in which one would be equal to any given number.

Let $a=x$. Squaring both members, we have $a^2=x^2$. Then multiplying both members by x , it reads $a^2x=x^3$. Adding $-a^2$ to each member, we have $a^2x-a^2=x^3-a^2$. Resolving into factors $a^2(x-a)=(x-a)x^2+ax+a^2$. Dividing the equation by $(x-a)$ we have $a^2=x^2+ax+a^2$. But $x^2=a^2$ and $x=a$, therefore $a^2=a^2+a^2+a^2$, or $a^2=3a^2$ and $1=3$. From this we derive the following general

RULE.

Make one of the first letters of the alphabet the *left*, and one of the final the *right* member of the first equation. Involve both members to a power whose exponent is one less than the number to which one is required to be equal. Multiply both members of the second equation by the right member of the first, and subtract, from both sides, the left member of the first equation, raised to a power whose exponent is equal to the "given number." Resolve both members into factors, having a binomial factor the same in both. Divide both members by the binomial factor, and wherever the *right* member of the first or second equations is found in this equation, substitute for it the *left* member, uniting and reducing "one" will be found equal the "given number." J. G.

Derby, March 19, 1850.

For the School Journal.

Mathematical Question.

Four men A. B. C. and D., have different sums of money. A. says to the others give me $\frac{1}{4}$ of yours and I shall have \$20. B. says to the others give me $\frac{1}{4}$ of yours and I shall have \$20. C. says to the others give me $\frac{1}{4}$ of yours and I shall have \$20. D. says to the others give me $\frac{1}{4}$ of yours and I shall have \$20. How much has each? J. G.

Derby, March 16.

For the School Journal.

WILMINGTON, March 19, 1850.

Messrs. Editors:—In the solution of the proposition which I sent you—which was given in your last number by your correspondent "S. K.," you inquire is it right? I should say it is not. The proposition states that A. receives 75 cents a rod for what he builds, and B. \$1.25 for what he builds. In the solution given by "S. K." A. has 75 cents for a part of what he builds, and \$1.25 for the other part, which is not right. There has been some talk whether the proposition was a correct one—whether two men could build wall on those conditions. A correct solution of it will show, if such can be had. If you continue to publish this Journal,—as I hope you will—I shall be pleased to hear any opinion which may be advanced. Yours, JIM.

THE AGRICULTURIST.

For the Vermont Agriculturist.

Raising Pumpkins on Grass Land among Fruit Trees.

MESSE. EDITOR:—In my communication published by you I think on the 26th of last January, I incidentally mentioned the subject of raising vines under and about fruit trees. The only object I had, or have now, is to excite the cupidity of farmers so as to induce them to try the experiment, which will result in renovating their orchards.

I have one-third of an acre of land, on which stand ten old apple-trees, set out about thirty years ago.—They were sprouts from a neighboring orchard. They had always received the same careless treatment of other trees in the neighborhood, with this exception—that some fifteen or twenty years ago they were grafted into winter fruit, Spitzenbergs, Greenings, Russets, Pound Sweetings (Vermont Sweetings of Goodrich.) A few years ago they received the same treatment that all old trees receive from a new proprietor and a young man—i. e., injudicious, excessive, and ruinous pruning. When I came into possession, I knew nothing what they were, or what they wanted; but by accident I gave the land a good dressing of chip manure, and the long-collected matter of the sink-spout. I minded them what I could; but, in reality, had no other object but to procure a good crop of hay.

My trees grew surprisingly, and for what reason I could not at that time tell. After using apples for the family, and not very sparingly either, I have for the last three or four years put into my cellar from ten to fourteen barrels of good grafted winter fruit. Last season it was not over ten barrels. I also have cut a good ton of hay yearly upon the land, and have also growing some twenty trees that yield me no profit. But having become a very nice operator, I dug about and manured my trees, and being unwilling to lose the immediate produce, I plowed around each tree two or three pumpkin seeds. These plants induced me to keep the ground free from weeds; and the result was that I obtained last year ten or twelve barrels of apples, a ton of hay, and a good cart load of pumpkins, to say nothing of the growth of my young trees. The pumpkins will not make vines and run, until the grass is cut, when they will make up for lost time. They were as productive as those among my corn.

I had another small yard of young fruit trees, set in rich grass land, which I treated in the same way, with the same result,—although the seeds were planted late and suffered severely from drouth. Had the seeds been planted early, and the season as good as usual, I have no doubt I should have had three times as many as I had. With a bad year for apples and hay, I still realized over the rate of one hundred dollars the acre.

Winter squashes, melons, tomatoes and beans may all be raised the same way to great advantage I think, although I have not tried them, particularly under small trees. All these results however depend upon

enriching the land, which for all purposes is necessary. C.

Transplanting Trees.

BY M. P. WILDER.

The preparation of the ground for planting an orchard is of great importance. The strong loam upon the surface, varying in depth from eight to twenty inches, should be enriched with compost manure; plowed and subsoiled, where underlying it there is a soil capable of cultivation. After this operation, let it remain some time that it may be subjected to the action of the sun, the air and the rain; then by cross plowing, harrowing or cultivating, let the subsoil, loam and manure be thoroughly mixed and pulverized, and it will be ready to receive the young trees. Before these are taken up, the field should be lined and counter-lined by drawing over it a chain or rope, or furrowed and cross-furrowed like a field for planting corn in hills, so as to fix the exact position of every tree, and to arrange the whole in rows each way.

The life, growth and productiveness of the trees depend much on the manner of *taking them up*. The transplanter should never forget that he is operating upon a living body, curiously and wonderfully made, and never to be treated with rashness and violence. If he removes the surface near the trunk, and then prunes the tree out of its place with his spade or iron bar, he will unavoidably break many of the delicate extremities of the roots which absorb nourishment from the soil, and put its life in jeopardy. On the contrary, he should gently remove the soil at some little distance from the trunk, carefully preserving the fibrous roots, and shaking off the soil which adheres to them. Where the trees are not immediately replanted, the roots should be buried in the soil; or, if intended for transportation, they should be covered with moss, and the trees packed in bundles of convenient size, and bound up in mats or in rye straw. The moss should not be wet, if the trees are to be sent by ship to a distant part of the country or to a foreign land, because it will absorb moisture sufficient from the atmosphere to preserve the roots in a healthy state.

The next part of the operation is *the preparation of the places*. Unless the ground has been prepared in the manner just described, this part of the work will require considerable labor and be attended with some difficulty. Their growth is retarded and sometimes their life is destroyed, by digging a small hole and crowding the roots into it without regard to their former and natural position.

Well do we remember a story which we heard our grand-father relate in our boyhood, that illustrates this branch of our subject. His neighbor, who had an orchard to plant, gave general directions about it to his workmen, the one a Yankee and the other an Englishman; immediately took his leave of them, and started on a journey, from which he returned after an absence of a week. Having received the usual salutations of his family, he went into the kitchen to see his men, and receive a report of their labor. The Yankee had set out three hundred trees, but the Eng-

lishman, only fifty. The next morning their master assigned the Englishman some other labor, and ordered the Yankee to set out the rest of the trees, amounting to two hundred and fifty. At the expiration of ten years, the fifty trees set out by the Englishman, were larger by fourfold than the others, and had produced more fruit than all the rest of the orchard; and "now," said the farmer, "if both of those men were here, I should rejoice in the opportunity to hire the Englishman to replant all the trees the Yankee set out." *The mode of planting made the difference.*

How did the Englishman perform the operation? He dug a large hole, several inches deeper than he intended the tree to be planted, and several feet in diameter beyond the utmost extension of the roots. He carefully trimmed off all the broken roots and limbs, then raised a small mound in the centre of the hole, upon the crown of which he placed the tree, that the roots might have their natural slope. He scattered some of the light soil which he had mixed with manure, upon the roots, which he had laid in their natural position, carefully adjusting the delicate fibres with his fingers. Having covered the roots, the season being dry, he poured water upon them sufficient to fill the interstices with soil and make it adhere to the roots. He filled up the hole, pressing the earth gently about the tree with his foot, avoiding the common practice of shaking it up and down by the stem. He rounded up the ground about the tree, so that when settled, it should be nearly level, or a little depressed near the stem, and so that the tree should have the same depth of soil as before.

Mulching is strongly recommended by some cultivators in the transplantation of trees. It consists in covering the ground about the stem with straw, seaweed, or litter, to prevent excessive evaporation and to keep the soil in a moist and equable condition during the hot sun of the first summer. We think this practice specially adapted to dry and sandy soils; but in low and wet ground it should be avoided.

The size most suitable for transplantation, varies with the kind of tree and of cultivation. Novices generally desire large trees, that will bear the next year; but theorists and skillful practitioners prefer those of smaller or medium size,—as in the apple, from five to eight feet in height,—because they are generally more healthy and vigorous, and, if grafted, they produce in five years more fruit, than those which are much larger, and which generally are more injured by removal from the nursery.

The distance between the trees must vary with their kind, and with the objects of their cultivation. The apple requires the largest space, the pear and the cherry less, the plum and the peach still less, and the quince the least. In a garden; and where the cultivator has but a small spot of ground, he may place them nearer; he may also economise his ground by alternating the apple with the peach, or the pear and cherry with the plum or the quince. In an orchard, thirty feet is a suitable distance for the apple; and other trees require less, in proportion to the size which they attain.

The number of trees which may be set on a given

space, will of course vary with their distance apart, and also with the kind of tree. The following table shows the number of trees which may be set upon an acre of ground, at different distances from two to thirty feet:—

2	10,890	13	257
3	4,840	14	222
4	2,722	15	193
5	1,742	16	176
6	1,210	17	150
7	889	18	134
8	680	19	120
9	537	20	108
10	435	25	69
11	360	30	48
12	302		

[Puritan Recorder.]

Report of the Committee

ON THE TRIAL OF PLOWS, WHICH TOOK PLACE AT THE MEETING OF THE AGRICULTURAL SOCIETY AT NORTHAMPTON, MASS., ON THURSDAY, THE 18TH OCTOBER LAST.

Gentlemen—Your executive committee, to whom was referred the subject of awarding premiums on Plows, have attended to that duty, and ask leave to submit the following Report:

The plow lies at the foundation of agricultural progress, and any improvement in its construction or use, diminishes the cost of production, and is so far beneficial to all who eat bread.

Good crops depend upon good plowing, as good plowing depends upon good plows.

The object of plowing is to fit or prepare the ground for seeding or planting, and the plow that does the most towards accomplishing this preparation at the same expense, is the best plow.

With a view to the trial of plows, the committee had provided a Dynamometer of the most improved construction, with a stationary power for moving the plow, and other apparatus for obtaining the weight of the furrow turned, which altogether was deemed capable of giving with nice precision, the amount of work performed by each plow, and the amount of team-labor expended in performing it; facts which would at once show the comparative economy of using the different plows submitted to the test, and assist the committee in coming to a correct decision on the premises.

The plows submitted for the premium, comprising not less than ten different sizes and adapted to different soils, were all of one manufacture, from Messrs. Prouty & Mears, of Boston, and constructed, as they claim, with a view to the "centre draft" principle.

No other competitor appearing on the field for trial, the committee were left to judge on the merits of the Messrs. Prouty & Mears' plows, by submitting them to the test of the instruments provided for that purpose, and by comparison with other plows called good, but not offered for premium, and by following them in the furrows for several hours on three several days as their meeting was adjourned from time to time, and with the further aid of the considerable personal experience of several members of the com-

mittee in plow-holding; and witnessing their light draft, easy holding, and excellent work, the committee were unanimous in awarding to Messrs. Prouty & Mears the Society's premium for the best sward plow.

Of the different sizes of "centre draft" plows put into their hands for trial, by the Messrs. Prouty & Mears, the committee, in discharge of their duty to the Society, recommend, as a plow for all work, the No. 54 S. S. as the best plow within their knowledge. Of easy draft, it turns the sward most perfectly, and in a clear, free soil preserves its furrow without a holder; and if the ground is in the best condition for plowing, nearly prepares it for seeding by its peculiar shape and turn of share and mould board, which pulverize and disarrange the particles of the furrow slice, and consequently aid fermentation and the elaboration of food for plants from the organic matter in the soil; all at much less expense than the same point is obtained by the harrow, and in perfection, perhaps fully equal to that "spade husbandry," which has been termed "the perfection of good culture."

In stubble land the work of this plow was found to be very good, and with the aid of a light chain, made fast one end near the plow elevis, and the other to the right hand whiffletree, with sufficient slack chain to sweep the ground, say, one foot in advance of the plow, the stubble was entirely covered in, and the work pronounced to be of the most perfect and satisfactory description.

This plow is a self-sharpener, and of full medium size, suitable for a single team, and in the opinion of the committee, should be owned by every farmer who keeps but one plow, until it is superseded by a better one. Its self-sharpening point and share add very much to its value, by saving perhaps one half of the expense of repairing necessary with the common plow point, and this, together with additional tilth or pulverization given under favorable circumstances over the smooth, hard, flat furrow plow, superceding or greatly reducing the immediate use of the harrow, may be safely said to amount to an ultimate saving of more than the whole first cost of the plow. To follow this plow, is to like it.

Plow No. 25 is a trifle smaller than No. 54, and in comparison with the weight of sod turned, is rather of the lightest draft of either plow brought forward at the trial. It holds easy, turns a smooth flat furrow, and may safely be recommended to those who prefer that kind of work without regard to pulverization, as the best sod plow for a single team.

Plow No. 72 excited the admiration of the committee, by its easy holding, comparative light draft, and good work, and obtained their recommendation as the best sod plow for deep plowing, or heavy work requiring a double team.

A true "centre draft" plow is so constructed that the central point of its line of draft, will balance on the central point of the line of resistance, and maintain its given depth and width of furrow in a free and clear soil without assistance.

If otherwise constructed, the line of draft is more

or less oblique to the line of resistance, and requires the labor of a plowman to counteract the oblique tendency and consequently increases the labor of the team in proportion to the waywardness of the plow, and the counteracting struggles of the plowman.

This was so manifest during the examination and trial, that some of the committee were led to believe that the vaunted office of the "wrestling plowman," was nothing more or less than a necessity growing out of the imperfect construction of the plow; or in other words, the plow-holder was needed mainly to conceal the ignorance or mistakes of the plow-maker.

This view so strongly impressed itself, that it was proposed to recommend to the Society, to offer at their next plowing match, a list of premiums for the best samples of plowing performed by plows without a hand to turn or guide them, except at the end of the furrows, or when thrown out by accident. Aside from its novelty, which may be attractive, it will exhibit the running quality of each plow without concealment, and consequently call out the skill of the plow-maker.

A plow which unaided will keep its depth and width of furrow the most even and perfect in a clear soil, will require the less aid in a rough soil, and its easy draft and easy holding is scarcely less important in the latter than in the former.

A plow should not depend for its reputation upon the skill of the plowman, as is many times the case; but it should exhibit the intelligent skill of the manufacturer, if possible, to the extent of dispensing entirely with the aid of the plowman in giving a *specimen* of good plowing; and there is much reason to hope, that through the action of your Society in this matter such implements will be produced that our farmers will soon discard, as worse than useless, every plow that requires the labor of man to keep it from running out or turning over in a clear soil. In behalf of the Committee.

WILLIAM CLARK, *Chairman*.

Northampton, Nov. 1849.

REMARK.

On the subject of the above Report the reader will find in the Albany Cultivator for March, a good article by Mr. Holbrook of Brattleboro'. *Eos*.

Flower Garden.

Sow hardy annuals early; take the plan recommended by Bridgeman:—"Press a bowl edge downwards into the earth, until you have made a circular drill to the required depth, and plant the seeds in this drill. You may then bury any special manure in the centre, and there place the label; when grown, the stalks of the flower will form a circle, and the effect and mutual support will both be improved." Plant box edgings; clip the tops evenly and trim the roots judiciously, but do not plant without roots, for although the plants may grow they will never form an even edge. Avoid grass edgings—they are too troublesome; the sea pink, mignonette, phlox subulata, and phlox procumbens, are better in every respect.—*Working Farmer*.

From the Germantown Telegraph.

Potatoes.

MR. EDITOR:—I appear once more before the readers of the *Germantown Telegraph*, on a topic which all will acknowledge to be one of importance to the farmer—that of potato raising. I will give you our mode of culture, down here, where the potato may be regarded as a staple product, and where its cultivation is as well understood as perhaps any where else on the globe.

Potatoes planted early generally succeed better and produce more liberally than when planted late. There are various methods of cultivating this root practised, but I am aware of none that is preferable to the following:—

Break up sward land in the spring, roll, harrow thoroughly, and spread on your manure in liberal quantity, harrow again, and having furrowed, place some good compost in the drills, drop your seed, and cover. The compost should be fine, consisting of rotten leaves, chip manure or muck—say one load; house ashes, ten bushels; salt, four bushels; lime, five bushels; gypsum, one and a half bushels; nitre, twenty pounds; the whole to be thoroughly incorporated and reduced, by repeated turnings, to a perfectly homogeneous mass. One shovelfull of this in every hill will be sufficient. The potatoes may be covered with an instrument made by fastening two pieces of plank, six inches wide and three feet long, together, in the form of an A, and drawing it lengthways of the rows by means of traces secured to the wide end. A cross-piece is secured to the upper part, into which handles are inserted for its guidance, similar to those attached to the hoe-harrow and cultivator. This instrument, which may be constructed in a few hours by any field hand who possesses sufficient ingenuity and artistic skill to "whittle a Yankee shingle," works admirably, and is one of the most perfectly operating labor-saving implements to be found on the farm. If necessary, the bottom of the sides may be scarfed away, say from one-half the distance from the fore part to the hind part, reducing the sides by a gradual taper to one-half or one-third their width at the bind end. This will leave the rows over which it passes elevated somewhat in the middle, or just over the seeds—an arrangement sometimes necessary, especially where the furrow plow has excavated but a shallow trench, or where the soil is too close or compact, from recent rains or other causes, to admit of the coverer gathering sufficient earth competently to imbue the seed. By "shoeing" the coverer, which is effected by attaching two strips of iron to the lower edges of the triangle, and allowing them to project some two inches or so from the edges, inward, with a slight inclination downwards the entire surface between the rows will be "scraped," and the soil thoroughly loosened and refined. As soon as the plants make their appearance, a liberal dressing of lime and plaster, or house ashes and plaster, should be applied broadcast, and the cultivator introduced to arrest the development of weeds. No plowing or harrowing should be allowed where the cultivator can perform its sufficient work; nor should there be any—not even the slight-

est—elevation permitted about the plant. Some, perhaps, will question the philosophy of this theory, as it is a practice to which they have always been accustomed; but this is neither here nor there in establishing the truth or falsity of the usage. Where a high conical hill is made around any vegetable, it can only serve as a drain or ditch, by which water is conveyed from the vegetable and into places—the interstices between the rows, where it is not immediately wanted, and of course can effect only a remote advantage; but a flat surface allows the rain to penetrate the soil immediately about the roots, and exert its invigorating influences at once and with power upon the plants. Besides, in a dry time, the gathering of soil into hills, by exposing a greatly increased surface, augments the effects of drought. This no one can doubt who reasons upon the subject candidly.

In cultivating the potato, many adopt a very loose and reprehensible method; they seem to think that it is a hardy vegetable, and will therefore "fight its way through," even though left alone and unassisted; but this is an error, for although the potato will sprout, push upward to the inviting air, and form tubers, even when unaided, yet its productiveness and value, as a field crop, must ever intimately depend upon the care and cultivation it receives. No production better repays extra attention, none is more essentially injured by neglect. Weeds never should be permitted to overtop the vines, or indeed to corrupt the soil devoted to this root. They are no less injurious in the potato field, than in the garden, or among the corn crop; and where they cannot be thoroughly extirpated by one or two hoeings, the operation should be repeated till they are completely eradicated, and the soil emancipated and cleansed.

A NEW ENGLANDER.

Near Claremont, N. H., Jan. 1850.

Oliver Birchwood's Mode of Making Butter.

"To make good butter requires, in the first place, to have good cows. By good cows, I mean those that will give good, rich, yellow milk. But it should be remembered that cows, to give good milk, must have an abundance of sweet feed, and a constant supply of pure water. A cow that yields thin, blue milk, will make but little butter, and that of an inferior quality. The milk should be kept, in milking, as free from impurities as possible, and should be strained into tin pans as soon as it can well be done, and before the cream begins to rise. The milk pails, pans, pots, and churn must be frequently scalded and kept perfectly sweet. The milk, after being strained into pans, should be placed in a dry, cool, pure atmosphere. If the weather is favorable as to temperature—of the temperature we usually have in the spring and fall—the milk may stand thirty-six hours before the cream is removed; but in warm summer weather, twenty-four hours is sufficient; in all cases the cream should be skimmed before the milk sours. The cream, before churning, should be put into tin cans with covers, and the temperature of the cream should be ascertained by a thermometer, which in warm weather should be fifty-four degrees below zero; but

in the fall may be as high as sixty degrees. If the cream, before churning, is too warm, when churned the butter will be soft, and it will be impossible to work out the buttermilk; in fact, the butter cannot be made of but little value for table use. During the most of the season, the right temperature of the cream may be obtained by setting the cans into cold well or spring water, the night before churning; but the best way is to use ice, which every farmer may have through the season of warm weather at a trifling expense; and the night before churning, set the cans of cream into a tub, and pack ice around them, which will make the cream in fine order for churning, which should be done early in the morning when cool. Another advantage in having a supply of ice, is in carrying the butter to market in fine order. If butter is soft in consequence of the cream being too warm before it was churned, or is made soft by being exposed to a warm atmosphere, it is very materially injured for table use.

"Two years ago, Mrs. B. being in delicate health, and the working of the butter by hand being too laborious for her health, I procured a marble table which was of but little value, one corner being broken, and after fitting it on to a frame, I fixed a wooden roller, turned smooth, similar to those used by bakers to knead bread, and have used it for two years to work my butter; the roller being worked by myself, Mrs. B. standing by with linen cloths in each hand, to absorb with the cloths the buttermilk that works out of the butter and that does not run off.—After working out all the buttermilk with the roller, I work into each pound of butter, if intended for immediate use, three fourths of an ounce of fine-aifted rock salt, and one third of an ounce of double-refined loaf sugar. I work the salt into the butter by a wooden slice. Mrs. B. then shapes the balls by wooden spatulas, the hands not being used or coming in contact with the butter. The advantages of the roller are, that the butter can be more thoroughly worked under the roller than by hand, and the butter is kept much cooler while being worked, and may be done by man's labor. Mrs. B. made three hundred pounds of butter in June, packing it in stone pots, which has kept it perfectly sweet—in that, she put an ounce of salt to each pound of butter, which is salt sufficient to keep butter perfectly sweet, if the buttermilk is well worked out, which is very important."

Butter Making.

Dr. Francis A. Brewster of Hampton, Mass., in a recent communication to the Boston Cultivator, thinks that the subject of butter-making, and the adaptedness of churns, as an important means to the accomplishment of the above object, is not fully understood, also, the inventors of churns, and those who encourage them have entirely misconceived the correct principle involved.

He remarks: "Cream, consists ultimately, of substances called Caprine, Margarine, Butyrolin, Butyrine, Caporine, each of which is composed of a different acid, and a saccharine substance called Ox-

ide or Glycerin, unexceptible of the vinous fermentation; hence are known also, by the terms, Margarate, Cutyroate, Butyrate, Caproate, and Caprate of Glycerin; and sugar of milk, or Lactin, (susceptible of the vinous fermentation;) Asmozone, Alkaline and Earthy Lactates, and Phosphates, Alkaline Sulphates and phosphates, Earthy and Feruginous Phosphates. The latter are the constituents of Casein and Whey. The five first named of Butter, which cannot be thoroughly separated from the latter, until a partial decomposition takes place and Lactic acid is developed, or set free. When this result is obtained, it only needs to be worked, usually with the churn, afterwards with the spats, to prepare it for salting. The above constitutes the grand secret's solution of obtaining butter from cream. If cream is soured a little, and only a little in the natural way, it will separate immediately, in every case, if properly treated, because there is more or less milk taken off with the cream, it will usually take from five to ten minutes only, any season of the year, of moderate churning, to separate the butter sufficiently for the spats in any churn, except an atmospheric; the latter tending directly, by excessive agitation, indirectly to injure the quality or color, and diminish the quantities. The fault then is wholly in the preparation of the cream and not in the churn. The Thermometers however, have some conveniences. I will detail the course, which I conceive to be the best.

Cows should be fed with grass and carrots in Fall, hay and carrots in Winter, with a little meal in Spring, and grass alone in the Summer; should be milked nearly clean, and after a few minutes, stripped. After the milk has stood twelve hours in the pans, gradually heat it, till patches, about the size of a cent, are elevated above the rest, then remove, and let it stand, (guarding against extreme heat or cold,) about twenty-four hours more, or if the milk will probably sour before, heat again and skim; stir the cream frequently, till it is nearly or quite slightly sour only. Then at the temperature of about sixty-two, churn moderately, and in about two minutes, it may be worked with spats and salted. The remaining buttermilk will mix with a brine, which will soon form, when it should be worked again, and the next day again, and salted more, as in this manner, the buttermilk will be more readily and surely extruded."

He says that, by pursuing this course, 7 wine quarts of cow's milk, will produce one pound of as good butter as can be made. One cow will average daily in June, on common grass-feed only, and in thin flesh, 22 wine quarts of milk, of the above richness. Extra feed, he adds, increases the quantity of milk, but not the quality, except in color or flavor; the same quantity of milk producing the same amount of butter.

GRAIN FIELDS OF THE WEST. Jas. Davis, of Waverly, Ross Co., Ohio, cultivates 1800 acres exclusively Indian corn, and has this winter a corn crib filled, which is *three miles long*, ten feet high, and six feet wide. We presume this is one of the large-

est corn fields in the world, owned by a single individual. On the Great Miami Bottom, adjoining Lawrenceburgh, Ia., about 25 miles below Cincinnati, there is one field 7 miles long by three miles broad, extending in fact to Aurora, which has been planted down to corn for nearly half a century. Although corn is one of the most exhausting crops, no manure is ever used, and the soil is fertile as ever. The Wabash valley is also remarkable for the extent of its corn fields. We should be glad to see the statistics of some of the corn fields on the Illinois prairies. — *Cin. Gazette.*

Working Cows.

MR. EDITOR:—I wish with your permission to say something respecting working cows. I think they might be broke to the yoke while young, and accustom to do considerable labor, without stinting their growth or injuring their milking properties, doing nearly if not all the team work, necessary to be done on a small farm; and should experience prove this to be the fact, the small farmer would find it good economy to employ them in preference to horses or oxen. The expense to keep a horse, a yoke of small oxen, or two good cows, is nearly alike. A good 6 year old farm-horse and harness will cost, say 60 dollars, and will last perhaps, 14 years. It will cost 3 dollars a year for shoeing, which will be 42 dollars for 14 years. This added to the price of the horse is 102 dollars, and then the horse would sell for no more than the value of his hide and shoes. A yoke of oxen, worth 60 dollars, by exchanging at suitable times, would retain their value, and perhaps gain 10 dollars a year, which in 14 years would amount to 140 dollars net gain. A pair of cows, worth 60 dollars, would retain their value by proper exchanges, and for dairy purposes, and reckoning their calves, would be worth yearly, say 40 dollars; making in 14 years, the sum of 560 dollars clear profit. The above estimation is made on the supposition that the team was kept only for doing the usual team work of the farm, and shows a great saving in employing cows for that purpose, instead of horses and oxen. One of the greatest obstacles the small farmer has to surmount is, to be able to keep at all times, an efficient team for his farming operations, and other stock in proportion, so as to realize sufficient profit to meet his current expenses, and lay up a little annually against old age. Cows, I think, return a greater annual profit, putting in the labor of making and selling the butter and cheese, than any other stock kept on the farm, and could they be used as a team, they would be doubly valuable. Then again, if the farm was mainly stocked with cows, a larger number of hogs might be kept, which would be very useful in their way, in manufacturing manure, and when well fattened, sell for ready cash.

From what I have said, I do not wish it inferred, that I think horses and oxen can at present be generally dispensed with as a team; but that cows, in many cases, may be profitably substituted in their stead, and when the time comes in New England, that will come I think at no distant day, when it shall be

more generally known than it now is, that farms of a quarter the size of those now in fashion, with buildings and other fixings cut down in proportion, will yield a greater net profit than the larger, cows may be more generally used as a team, than at present. I make a motion and who will second it! that about 20 good boys from among your numerous subscribers, shall each break a pair of heifers the present Winter, for the purpose of using them as a team hereafter, and report their success at some future time, through the columns of the Cultivator, that this subject may be fairly tested.

R. SMITH.

North New Salem.

[*Boston Cultivator.*]

THE WINTER HARVEY APPLE. A fine variety under this name, has been brought into Boston market for several years, from Maine, and they have always commanded a liberal price, both from their fairness and excellence. A few years ago, Mr. W. Kenrick sent some of the apples, which he received from Maine, for exhibition before the Massachusetts Horticultural Society, and he also gave us one of the specimens. We found it to be a fine fruit; and we should have given a description of the figure of it before this, only that we have been waiting to ascertain if it was a new and distinct variety. Since a communication has been opened by Railroad to Vermont, the facilities of travel have brought many of the intelligent cultivators of that fine country to the city, and great quantities of produce have been forwarded, including large quantities of apples, of which the stock has been so limited in this neighborhood. Among them we have been surprised to find many barrels of the same kind we had from Maine, and called, in Vermont, the Winter Pippin. One gentleman informs us he had *twenty bushels* from one tree. The apple is of large size, somewhat conical form, with a smooth green skin, slightly suffused with blush, and possessing a rich subacid flavor. It is just now in perfection, but will keep till March. We shall, now that we have learned more in regard to it, describe and figure it in a short time.—*Hovey's Magazine.*

WHAT IS A FAIR RENT FOR DAIRY COWS! What is a fair average number of pounds of butter per annum to be expected from a common lot of dairy cows in this country?

A proprietor of land, in Orange County, proposes to rent me his farm next spring, with fifty cows, for which I should engage to give him a certain number of pounds of butter per head. Can you inform me what is a fair rent? I am satisfied with the terms of giving one-third of the crop for rent, but lest to accept his terms for the cows.

A STRANGER IN AMERICA.

The average annual yield of pounds of butter per cow is a very uncertain matter. We doubt whether it exceeds one hundred pounds per cow in Orange county; though we believe that two firkins (one hundred and sixty pounds) are considered a fair average. We know one lot of ten cows that average three fir-

kins each, equal to four hundred and eighty pounds per annum. We believe the most usual rent is one firkin for each cow. We saw fifty excellent cows the other day, for which the farmer gives the proprietor a rent of sixty-seven pounds each per annum. In this instance, the farm is very productive for grass, and the dairy conveniences of the best kind. When this is not the case, the lessee cannot afford to pay so high a rent.—*Am. Agriculturist.*

PROFITS OF ORCHARDING IN MAINE. Notwithstanding the great majority of farmers in this State, who have paid any attention to the cultivation of fruit, have taken so little care of their orchards, as to receive but little if any profit, it is not the case with all. A neighbor of mine, who has a young orchard of about one acre, that has been well taken care of, informed me that he should realize about two

hundred dollars for his crop of apples raised the past season. His trees have not yet come to maturity, consequently a greater amount of income may be looked for; yet it is difficult to conceive what other branch of husbandry, in this vicinity, could be made equally profitable, with so small an expenditure.

Another farmer in this county has a young orchard of about two hundred trees of choice fruit, who, as I was informed, offered to sell his farm, valued at three thousand dollars, for what apples would grow upon it for fifteen years, to be transported from twelve to twenty-five miles, and the orchard kept in a flourishing condition.—*N. E. Farmer.*

The culture of the castor bean will be commenced with energy near Cincinnati this season. A house in that city is furnishing the seed without charge to such as wish to try the crop.

CONTENTS OF VOLUME III.

THE SCHOOL JOURNAL.

A		Geography	G			Oh dear! what can the matter be?	136
Aiming at perfection	56	— Of the heavens	53			Patience, a German student's song	147
Algebraic paradox	163, 184	Gems from Africa	104			A school song	152
Alphabets	39	Good example, a	36			What constitutes a man	183
Api remark	85	Graham's English synonyms	50			Power of expansion in ice	99
Artifice of the nine-killer	99			H		Pressure of the sea	24
Attendance—evidence of improvement	17	Has Vermont degenerated?	18			Pronunciation, errors in,	36
		Hocus-pocus	56			— Of Indian names	56
B		How to train the conceptive faculty	179			Pursuit of novelties	120
Beat this if you can	21			I		Quackery	51
Book-keeping, the study of	82	Immensity of the earth	117			Questions, propositions, &c., 24, 56, 120,	
Books, the choice of	181	Indecision	35			136, 152, 168, 184	
		Institute of Instruction, American, 35	51, 55, 65			— Solutions of	7, 56, 63, 120, 152, 168
C				J			
Change of color in fish	104	Jacotot's maxims for teachers	189			Reading and thinking	136
Chemical amusement	182	— For pupils	180			— Habit of	119
Children at home	7			L		Recitation, manner of,	115
— A correct taste in	168	Learning to see	152			Recreations, on,	181
— Education of	52	Least common multiple	101			Remarks on books and teachers	4
— In school	52	Leaving school too soon	162			Responsibility of each the happiness of all	98
— Who read the School Journal, to, 114				M			
Circular to teachers in Windham Co.	117	Maple sugar and the school children	104			School architecture	3
Close observation	151	Massachusetts	167			— Children, New Year's greeting to for 1850	129
Common school convention at Middletown, Ct.,	20	— Educational reports	146			— Committee, suggestions to,	116
— At Norwich	132	Maxims of Bishop Middleton	136			— Government, incidents of,	6, 103
Common school system in Maine	37	Men to make a State, the,	88			— Houses	113
Common schools, rules for in Derry, N. H.,	131	Mistake, a great,	184			— Law, the new,	49
Correct speaking	39	Monotony—an exercise	184			— " of Connecticut	113
Curiosities of Stuttgart	182	Moral influence in schools	147			— " of Vermont, the first,	33
		Morals and manners	136			— " What has it accomplished?	118
D		Motives	117			Schools, are our improving?	84
Declivity of rivers	83	Mother's part, the,	117			— How can our system for the improvement of be rendered more efficient?	34
Directions and instructions for the teachers of Cincinnati common school	100	Music of insects	35			— In Franklin county	148, 164, 166
Domestic education	22			N		— Notes of	131, 168
Drawing in New York schools	22	National school convention	20			— Our—the responsibility	50
				O		— Summer, notes of,	84
E		Orthography	59			Scholar's Leaf, the	24
Earnestness	149	— Rules in	164			Self-taught men	119
Education in Indiana	22	Out-door preparation	54			— Naturalist, another,	135
Enterprise and progress	52			P		Send your children to summer schools	5
Enunciation	51	Parents and teachers	49			Seven directions	39
Errors about time	23	— Respect for	119			Shepherd botanist, the,	117
Examination of teachers	178	— To	150			Singing-school scene	23
Exercise upon adjectives	151, 165	Pestalozzi among the children	181			Square numbers, properties of,	168
		Pestalozzi's way of teaching	68			— Years	133
F		Plain advice to country girls	3			State common school conventions	21
Farm, shop, and school	163	Please write for this Journal	2			Summer schools	35
Fireside games	7	Portray—To the teacher	40				
Fourth of July	23	Epigrams	56			T	
		Slow and sure	80			Teachers' Association, Windsor Co., 116	
		Good wishes	80			Teacher, the,	183
		Deeds eternal	103				

Teacher, assault on a	35
— Institutes	6, 40, 130
Teachers, examination of	102
— Female in winter schools	86
— Qualifications of	143
— Suggestions to	81
— To	91
— Wages of	167
— Who do not read	107
Teaching	109
— Among the Athenians	109
— Without books	130
Teach one thing at a time	32
Thoroughness, the teacher's duty	115
Three Thursdays in one week	130
Time by the forelock	135
Travels of sound	120
To the Parents, Guardians, and Friends of the children in Vt.	161
Wants	51
Wonders of Philosophy	56
Writing	22

THE AGRICULTURIST.

Acknowledgements	122
Agricultural experiments, interest-	20
— Fairs	9
— Papers	9
— Premiums	26
— Society, Windsor county	137
Agriculturist, writing for the	9
Agriculture, ancient	154
— Great discovery in	127
— New discovery in	125
Alpacas for the U. S.	95
Animals should always be kept in a	130
surviving condition	27
apple, great profits	100
— Improvement of from the Crab-	27
apple	100
— Ladies sweeting	27
— Orchards, profits of	14
— Trees, iron for	123
— " monster	15
— " renovation of old	123
— Worm, remedy for	45
Apples, Vermont	154
Ashes and Lime—experiments	108
Beans vs. bugs	32
Bees, treatment of	69
Blackberry, culture of the	13
Bread	26
— Making, a short chapter on	29
Breaking steers	45
Buckwheat without grit	106
Bugs, bitters for	40
Bureau of Agriculture	105, 137
Butter, English mode of making	47
— Important discovery	31
— Making	156, 139
— Oliver Birehwood's mode of ma-	168
king	168
— Shaker	12
— Vermont	25
Cannomille	127
Carrots, cultivation of	38
Cattle, breeds of	134
— Fattening	126
— Feed	138
Charcoal, a substitute for	63
— On flowers	11
— Roads	157
Cheap and valuable paint,	36
Cheeses, large vs. small	47
Chestnuts, planting	128
Churn, Anthony & Emerson's rotary	26
Cold, to cure a	128
Color of houses	11
Corn cobs	152
— Stalks	60
Cow, a worth having	30
— A good	63
Cows, good	30
Currant bushes	61

Destruction of rats	31
Different crops in alternate rows	30
Driving oxen	156
Dutch poor-colonies	171
Economical plans	109
Eggs, a constant supply of	112
Evergreens for ornament	156
Facts in chemistry	58, 89
Farming, good	61
— High	131
— Profits of	130
Farming, Conn.	130
Farmer, a Morris county	130
Feeding stock, economical mode of	155
— Economy in	155
Fence posts	95
Flowers	26, 94
Fruit, at Plattsburgh, N. Y.	174
— Preserving fresh for winter use	174
— Raise more	125
— Trees and garden vegetables	125
— " covering the soil about	12
— " mulching	34
— " old	89
— " to raise good for yourself	110
Fruit-growing in Vermont	133
Fruit-grower's Convention, Vt.	27, 110
Fruit Trees, raising pumpkins on	183
Game at definitions	14
Garden, the	11
Geometry applied to farming	172
Gilmore's patent apiary	10, 42
Gooseberries	10, 42
Grafting grape-vines	10, 42
— Interesting fact in	44
— Upon grafts	91
Grapes, culture of	138
Grape, the best American	138
— Vine, ringing the	122
Grass seed, sowing	60, 106
Grasses, a mix of	46
Great nursery, a	157
Guan compared with ashes	112
Gutta Serena solution	112
H	11
Hogs, make your work	156
— Molasses in fattening	123
Horse, to make a sure-footed	108
Horticulture	174
Hovey's green-houses	121
K	90
Keep the premises clean	90
L	48
Life of the husbandman in Hindos-	91
tan	48
Lime and salt mixture	94
M	92
Management of muck	92
Manure, fresh vs. decayed	62
— Influence of	139
— Manures	13
Mutton	45
— And fine wool	97
N	173
Narrow furrows, on	173
Nettles, utility of	112
Number of dogs in the U. S.	62
O	16
Orcharding in Maine, profits of	16
Orchard, six reasons for planting an	49
— Mr. Phinney's	27
Order of farms	49
Over-laboring and under-thinking	10
Ox and pig killing in Rome	187
P	15
Patent wagon	15
Pears, a few kinds and the right ones	153
— Profit in	153
Pear-seedlings, best method of raising	45
Pens, comparative growth of	27
Plank roads	27
Planting, close	14
— Distance table for	57
Plum, culture of the	122
— Trees, black warts on	90
Pigs, notes on	90

Plow, Bartlett's double	124
— Dr Holmes' report on the	149
Plowing, deep	61
— Subsoil	138
— " for corn	158
Pork in Middlefield, Mass.	16
Postage on seeds and grafts	155
Potato, cultivation of the	12, 138
— Culture	30
— Grand banquet to the	142
— Patch, a nice	108
— Rot, Dr. Hayes on	108
Potatoes, improvement of	10
— For planting	135
— Large and small for seed	45
— Premium	169
— Small	141
— Versus corn	13
Preserving buds and grafts	59
Prize essay	62
Poultry	121
— Business, the	121
— Cheap method of fattening	121
— Different breeds of	123
— Food for	121
R	62
Raising corn and rye	62
Rearing lambs for market	28
Rhubarb cultivation	144
Rose trees, to destroy the Aphis on	43
S	57
Science for farmers	57
Seed, preserving	34
Seeds, long vitality of	91
— Utility of select	43
Shall this paper be continued?	169
Sheep, age of deteriorates their wool	11
— Fine-blooded	147
— Marking	13
— The improvement of	44
— To know if they are healthy	128
Signs of a poor farmer	148
Smart-weed, virtues of	127
Steeps for seed wheat	108
T	48
The way domestic animals collect	48
their food	41
Thoughts for the young	141
Three crops in a season	31
Transplanting evergreens	185
— Trees, planting on wet ground	123
— The use of	104
True riches	31
Tobacco dust as a protection against	29
insects	29
V	60
Vegetable intelligence	60
W	126
Wagons and carts	126
Way to get on in the world	126
Wetting bricks, advantages of	47
Wheat, cutting and threshing	37
Wire fences	10
Wool-depot meeting	10
Working Cows	—
Domestic Economy.	—
An economical pudding—To bake	16
apples—To clean carpets—Im-	16
provement of bread	16
Baking potatoes—Baking stores—	32
To remove stoppers from decan-	32
ters—Curing bacon without smoke	32
New mode of washing—Washing	48
clothes	48
Jellies for the sick—Louisiana blue-	64
bread—Improvement in bread—	64
Soapstone griddles	64
Brushing and preserving clothes—	96
Peeling potatoes—The best soap	96
A blackwoods pot pie—To extract	112
ink from floors—To remove patty	112
and paint from glass—How to	112
make a good cup of tea	112
To remove marks from a table—	128
Washing clothes	128
Washing liquor—Corn starch—Rice	169
— To bake apples	169
Winter sweeten—Boiling potatoes	176
Washing made easy—To stop	176
mouse-holes	176

This book should be returned to
the Library on or before the last date
stamped below.

A fine of five cents a day is incurred
by retaining it beyond the specified
time.

Please return promptly.

